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INTERNATIONAL TRADE AND U.S. PORT OPERATIONS

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JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES

NINETY-EIGHTH CONGRESS

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INTERNATIONAL TRADE AND U.S. PORT OPERATIONS

FRIDAY, SEPTEMBER 16, 1983

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 1:30 p.m., in the Council Chambers, City Hall, Houston, Tex., Hon. Roger W. Jepsen (chairman of the committee) presiding.

Present: Senator Jepsen.

Also present: Robert J. Tosterud, professional staff member; and John Conrad, special projects director, Senator Jepsen's staff.

Senator JEPSEN. We now convene this hearing of the Joint Economic Committee on "International Trade and U.S. Port Operations" in Houston, Tex. At this time it is my honor to introduce the mayor of Houston, Kathryn Whitmire.

STATEMENT OF HON. KATHRYN WHITMIRE, MAYOR, HOUSTON, TEX.

Mayor WHITMIRE. Thank you. I don't usually get to speak from this side of the podium and I like it pretty well. Now that I have you in the hot seat today where I usually sit, I want to welcome you to Houston and let you know how glad we are to have this hearing in our city and to have this attention focused on our city, particularly on our ports.

We are doing quite a few things to put Houston on the map, and one of the things that has put Houston on the map for many, many years is our port, and we are extremely interested in its continued success and in its expansion and further development. The port is extremely important to Houston for a number of reasons, not the least of which is the fact that there are about 150,000 jobs in our city associated with the port operations. We look forward to that continued support and an increase in that number of jobs that develop out of the port activity.

We have been proud to be the third largest port in terms of total tonnage, but even more proud to be the first in the Nation in foreign commerce coming through our port. We are looking forward to that continued activity. We have a number of people here today who are associated with the port and with other transportation activities in the city of Houston and we're just pleased to have this committee hearing and this attention focused on our city. We're especially pleased to have you here with us today in Houston, and we're glad that you took this time to come and hear our viewpoints.

We have some members of our city council with us today. I don't know if they've had a chance to get introduced. We have Councilmember Eleanor Tinsley and Councilmember Ernest McGowen. I'm sure that Congressman Leland is going to offer quite a few more comments in a few minutes. We're very glad to have him with us. I want to thank you for being in Houston and welcome you officially to our city hall and our council chambers and to our city. Thank you very much.

Senator JEPSEN. Thank you, mayor. I'm pleased to report to you, mayor, that sprinkled throughout the conversations this morning with a number of people that I was with as we toured the yards and the loading-out operation, when the city's mayor and its governing council was mentioned, your name was always mentioned as one who had brought people together; one who had as a chairman of the board brought the right folks to the right place at the right time to get things done. That's true, and I think its a great testimony to what real leadership is all about. That goes well for Houston and I thank you for coming to join us today. I did have the privilege of dining this noon with Mr. McGowen and Eleanor Tinsley. At this time, Eleanor, do you have any remarks that you would like to make?

Ms. TINSLEY. It was a delightful luncheon and so many of us were there, and we do echo what the mayor has said. We welcome this committee to Houston. We think great things will come of this hearing, so thank you for being here.

Senator JEPSEN. We welcome Ernie McGowen.

Mr. MCGOWEN. Thank you very much for giving me the privilege of meeting you, and dining with you. I want to say that I could echo what you have said about the mayor being able to put people together. We have worked very, very hard with the railroads in order that we may have the best transportation system as far as rail is concerned in the United States. We just won't take second to anybody. I am very, very proud to be able to do this. Being an old railroad man, I can understand what is going on, and we just work together and have a good time. I want to welcome you and thank you for coming and giving our city your grace. Thank you.

OPENING STATEMENT OF SENATOR JEPSEN, CHAIRMAN

Senator JEPSEN. Thank you, Mr. McGowen. Now is the time when I have the privilege of making some opening remarks before we recognize the distinguished Congressman Leland for his remarks. The focus of today's hearing is International Trade and U.S. Port Operations in Houston, Tex. We can all fully appreciate that few economic activities are as complex or as controversial as international trade. Given all the economic, political, military, and cultural self-interests and alliances in the world today, the volume and extensiveness of international business transactions is truly phenomenal. Business, whether some like it or admit it or not, is a universal pursuit and the foundation of world relations. It's very interesting to note that when it comes to international trade, every country is a capitalist. There are no Socialist or Communist countries, to the best of my knowledge, who extend their altruistic economic doctrines into the international trade marketplace. In fact, if there is a country which practices to each according to their

needs, it is the United States. This is best exemplified by its international food donation programs.

Few would argue that international trade can be accurately described as each entity pursuing their self-interests; yet, that is also the most fundamental definition of capitalism. So I guess it's a classic example of government saying to their subjects, "Don't do as I do, but do as I say." The consequence of international trade capitalism, of course, is competition. While certainly and unfortunately not the perfect, pure, or free variety, world markets are tremendously competitive today. Immediately following World War II, the United States was economically, politically, and militarily unchallengeable. True to its heritage, the United States began immediately to lend a helping hand and extend a hand to restore the world's economic balance through the Marshall plan, the Bretton Woods Agreement, which was an alliance formed to facilitate international trade, and its essential support of the United Nations, the World Bank, International Monetary Fund, and GATT, the general agreement on tariffs and trade. Today virtually every country in the world participates and benefits from the international exchange of goods and services. All countries are certainly anxious and more and more are demonstrating a capability to expand their shares of world production and foreign sales. Perhaps nowhere is this more true than in the case of agricultural production and trade.

The U.S. Department of Agriculture has projected that the United States will produce only 19 percent of the world's grain production in 1983–84 compared to 22.2 percent just 2 years ago. While the United States has reduced its grain production by 94.3 million metric tons since 1981–82, the rest of the world has expanded their production by 81.1 million metric tons, almost totally offsetting our unilateral supply control efforts. Perhaps more disturbing, our share of the world grain trade has fallen from 47.8 percent in 1981–82 to a USDA projected 45 percent in 1983–84. While wheat is our biggest problem, U.S. sales of course grains, cotton, and even soybeans are projected to be at or below the export levels of 2 years ago. My point is that we have our work cut out for us. And I mean "we" in a most all-inclusive way. The production and marketing of U.S. agriculture products is highly complex, comprehensive, and perhaps most importantly, a very cooperative system. Input suppliers, farmers, storage and marketing firms, transportation companies, exporters, port operators, and public-policy-makers to mention only a few, are all integral parts of the system. Where one fails, the entire system suffers and our competitive position in world markets is compromised and sales, business for all of us, are lost. I, of course, can't emphasize the importance of port operations and facilities to agriculture products enough. After all, that's why I'm here and why operations at the Port of Houston have been such a strong personal interest of mine for so many years.

The financial well-being of Iowa's farmers and therefore Iowa's economy are integrally tied to the storage and distribution facilities, and the men and women who manage and operate these facilities here at the Port of Houston. We have the same goals and ambitions. We are burdened by the same struggles and disappointments and we share a common fate. Perhaps nowhere is our common fate more evident

than in the future direction of national farm policy. You know as well as I that the most efficient, innovative, and technologically advanced farm product export-distribution system can be seriously compromised by outdated and ineffective farm policies and programs and foreign policy actions. The reverse is equally true. The best farm policy is worthless without the means to carry it out. That is why the full Joint Economic Committee as well as the Subcommittee on Agriculture and Transportation, chaired by Senator Abdnor during the last 24 months, has held 22 public hearings on the subject of the importance of agriculture to the U.S. economy, the changing economics of agriculture and the evaluation of future farm policy choices. Our goal must be to strive for farm policies, and farm product distribution systems which are mutually supportive. I understand the Port of Houston, its public officials, rail management and labor, grain terminal operations, and several agriculture interests, have an important story to tell. And that's why we're here today. I'm eager to hear it. At this time I would invite to the microphone the distinguished Congressman Mickey Leland. I'm not accustomed to a hearing where people go up in a box and talk like this. It kind of intimidates me, but you can use it there or come over here.

Representative LELAND. I'm not accustomed to it, either, Senator, unless I'm jumping on the mayor or city council. For the same reason, I don't want to jump on you.

Senator JEPSEN. I thank you for that. Some people do. Nice to see you. I would invite you to stay and participate in the questions, answers, and other responses if your schedule permits, Congressman.

Representative LELAND. I'm afraid that I won't be able to stay. I appreciate the invitation, though. It's very rare for a lowly Member of the Congress to sit in the grace of such a distinguished gentleman from the other side of the Capitol. I hope at some other point I will have the opportunity.

Senator JEPSEN. See, that's the way we treat each other in Washington all the time. The only thing we haven't said is, "I'm awfully glad, Congressman, you took time out from your busy schedule to be here."

STATEMENT OF HON. GEORGE THOMAS (MICKEY) LELAND, A U.S. REPRESENTATIVE IN CONGRESS FROM THE 18TH CONGRESSIONAL DISTRICT OF THE STATE OF TEXAS

Representative LELAND. Mr. Chairman, I want to welcome you. You are sitting now in the middle of the 18th Congressional District, which is my district. I welcome you here, particularly for the reason that you're here. We're deeply grateful for the interest of the Joint Economic Committee in the rail transportation improvements at the Port of Houston.

We are understandably proud, Mr. Chairman, of the progress that has been made in increasing the capacity of the Port of Houston to handle the growing demand for services in the collection and distribution of freight moving in international trade. Your committee selected the Port of Houston as a case study and we believe your emphasis on Houston and the support which we have received have been justified.

The Port of Houston, the third largest in the United States, is an important trade gateway for international commerce with our Nation's heartland, as well as Houston's gateway to the world. The economic strength and viability of the Port of Houston is an integral element of the economic health of the city of Houston. It is because of this interrelationship that the cooperative effort which has resulted in an increased rail transportation capacity at the Port of Houston is so important.

Let me take this opportunity, Mr. Chairman, to commend you and the members of the committee, for your foresight and leadership in advancing the Port of Houston improvement project. You in particular, Mr. Chairman, are to be commended for your commitment to increasing the rail transportation capacity at the port. Representing, as you do, one of America's leading agricultural States, you have served the farm community well in working to subdue the railcar shortage problem that plagued grain producers in the Midwest. The capital and operational improvements, and in particular the unit-train concept, and the overall systems approach which have resulted from your interest and efforts, have benefited a wide range of people, from Iowa farmers to workers at the Port of Houston. We are grateful for your interest and determination.

This project, which began with an effort to ease the railcar shortage growing out of congested port operations, has substantially increased the importance of the Port of Houston to a large segment of our agricultural economy. Further, this increasing attractiveness to producers and shippers has increased business at the port, increased port and port-related jobs, and strengthened the economy of the city of Houston.

Setting aside the clear economic benefits for a moment, I believe this project is, and will continue to be, important because it represents a best-case example of a partnership between Government, business, and labor.

The Federal Government, at the urging of the Joint Economic Committee and working primarily through the programs of the Department of Transportation, has provided funding for research and study which have led to the development of a systematic approach to port improvements.

Transportation companies, shippers, and receivers have committed substantial capital to port improvements, in addition to implementing operational changes.

The Government and the affected business interests have worked hand-in-hand with port labor organizations, which have instituted policies which fit the systems approach and made the manpower available for increased and improved service.

The cooperative effort, demonstrated in this project, is critically important, in my opinion, because I believe it is needed in, and can be applied to, other trouble spots in our economy. It represents a fundamental recognition of the fact that all elements of the economy have a stake in such improvements and benefit from them. This cooperative effort goes a long way toward breaking down some of the old barriers and misunderstandings which have crippled the recovery efforts of other industries. I commend all involved in this joint effort

for the spirit of commitment, cooperation, and communication evidenced in the Port of Houston project.

It seems to me, Mr. Chairman, and I know it is a focus of this hearing, that such an approach can be invaluable to other port facilities, as well as other key elements in our transportation system.

To that end, I want to take this opportunity to offer my continuing support to the Port of Houston improvement project and to other similar efforts.

I appreciate the opportunity to be here today and I thank you very much for your wisdom and your presence.

Senator JEPSEN. Thank you, Congressman. I think the Port of Houston and the management of all its activities is not only a great credit to this area but to this congressional district and your obvious enthusiasm reflects that. I think it will shine as a bright light as it continues to move out and to improve and to expand. I indicated at noon to a small luncheon group that I think the Port of Houston parallels the story as told about Carl Sandburg. Some senior citizens were outside the archives building in Washington some years ago. He happened to be standing out on the sidewalk. One of the senior citizen ladies who was on the tour group standing there, looked and saw the sign that said, "The Past Is Prologue." She turned to Carl Sandburg and said, "What does that mean?" He said, "I'm not sure, lady." He kind of scratched his head, but he says, "I think it means you ain't seen nothing yet." And I think that typically describes this fine city and port.

We have now Congressman Jack Fields, who has joined us on my left. I don't mean anything by that politically. Congressman Jack Fields, welcome. I thank you for coming to this International Trade and U.S. Port Operations hearing. I'm looking forward to hearing from you. I invite you, too, to join us in our panel as we have our discussion and questions this afternoon if, indeed, your schedule permits.

STATEMENT OF HON. JACK M. FIELDS, A U.S. REPRESENTATIVE IN CONGRESS FROM THE EIGHTH CONGRESSIONAL DISTRICT CF THE STATE OF TEXAS

Representative FIELDS. Mr. Chairman, thank you very much. I will just say that I think it's appropriate that I follow my distinguished colleague, Representative Mickey Leland. We share much of the Port of Houston and this particular project in our congressional districts. So I'm pleased to follow him.

Mr. Chairman, I am pleased to have this opportunity to welcome the members of the Joint Economic Committee as well as other hearing participants and guests to the city of Houston. We in Houston are enthused and proud of the phenomenal successes of the Houston terminal project in improving the efficiency of the Port of Houston.

Mr. Chairman, each of us here today recognizes the importance of international trade. Strong export markets are essential to the vitality of both our agricultural and industrial complexes. In recent years, high unemployment, a sagging economy and an unfavorable balance of payments have brought international trade issues to the limelight in Congress. And Congress has responded with the Export Trading Companies Act and is considering various other legislative remedies to fa-

cilitate exports. Unfortunately, the pivotal role which the transport industry plays in the export process is often overlooked. For this reason, I am delighted that the Joint Economic Committee has recognized the vital nature of the transport link and has chosen the Port of Houston as a case study to illustrate the achievements of a cooperative approach between industry, labor, and government in improving port efficiency.

The significance of the Houston terminal project is immense. Insights gained from the project are broad in scope and are certainly not limited to the Port of Houston or to agricultural products for that matter. The Houston terminal project has and will continue to benefit nonagricultural export commodities, directly through actual port improvements and indirectly by paving the way for similar cooperative arrangements. Likewise, it would be folly for other U.S. ports to ignore the successes of the Houston terminal project. Application of Houston's cooperative approach elsewhere is a vital step in bolstering our Nation's export capabilities and competitiveness.

My personal commitment to the House terminal project is long standing. I have made lengthy onsite inspections of the overall port operations and improvements, and I have been impressed with what I have seen. Commendations are certainly in order for all parties: to the rail and elevator industries for their willingness to alter industry practices and, likewise, to rail labor for their willingness to modify and adapt various labor rules. Were it not for the progressive attitudes and actions of rail labor, there would be no hearing here today. Finally, I extend thanks to the Departments of Agriculture and Transportation which provided both seed money and the neutral third-party guidance essential to the terminal project.

Although numerous successes of the Houston terminal project are already evident, it is my sincere hope that the Houston terminal project will not be considered a closed chapter in port improvements. Much has been accomplished but much still remains to be accomplished. As a member of the House Energy and Commerce Committee, I am especially concerned that the guiding role of the Department of Transportation not be withdrawn before the terminal project has reached its full potential.

With that closing thought, Mr. Chairman, I would like to thank you and the members of the Joint Economic Committee for allowing me the opportunity to participate in your distinguished hearings. Thank you very much.

Senator JEPSEN. Should Congressman Mike Andrews come in at any time, we'll invite him to join us and stop wherever we may be in the panel for any remarks he may have. At this time I would like to invite panel No. 1, the public agencies panel, to take their place behind their nameplates. To my right is Thomas A. Till, Deputy Administrator, Federal Railroad Administration, U.S. Department of Transportation; Martin Fitzpatrick, Director, Office of Transportation, U.S. Department of Agriculture; C. Phillip Baumel, chairman, Houston/Iowa Grain Transportation Committee; D. K. Joiner, director, and C. L. Little, codirector, of the Houston terminal project.

While they're coming up, it is with a great deal of satisfaction and nostalgia that I recognize some of the people on this panel. It was 5 years ago when I came down to Houston, primarily at the initiation of some real good staff work by a man known to me as "Buzz" Fitz-

patrick, now Martin Fitzpatrick. They call him Martin since he's become the director of the Office of Transportation, Department of Agriculture. Mr. Fitzpatrick and Mr. Baumel visited and advised me of the great economic interests that my constituents have in this port. We came down here to visit. At first blush, and with some degree of trepidation as we might have been considered as interlopers, we requested to visit and talk with Houston port labor and management and the railroads. We wanted everybody to sit down at the same table and talk with our producers, shippers, and processors from Iowa.

And one thing led to another, and thanks to the Collins' and the Fitzpatricks' and the Andersons', we all got together. For some of us, it was the first time, even though we've been located in the same general area. We sat down and opened up and exchanged ideas. And it didn't hurt; in fact, it worked pretty well. It was kind of enjoyable. As I indicated this morning when I stood in front of that computerized, electronic board in the control center, I thought for a while I was at NASA or SAC headquarters. It was somewhat different, I might add, than when I first came here in the spring of 1979. It's a great testimony to what happens when people of good faith join arms and work together. It's what happens when we stop trying to point fingers and affix blame and get to work at solving a mutual problem. It's what happens when we stop our slogans, and instead of slogans provide solutions. It's real refreshing to come to Houston now and renew old acquaintances, and look as I did this morning at the upgraded, highly technological, mechanized, efficient operation in Houston. With that gentleman, you may proceed in any manner you so desire.

Mr. TILL. Mr. Chairman, thank you very much. I think what we've decided on was to start at this end of the panel and move straight on down. If I might, I'd like to make a summary of my remarks for the record.

Senator JEPSEN. I would advise you and the rest of the panel members at this time that your prepared statements will be entered into the record. You may summarize. In fact, you are encouraged to do so. You may proceed in any way you so desire.

STATEMENT OF THOMAS A. TILL, DEPUTY ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION

Mr. TILL. Thank you, Mr. Chairman. I am delighted to join with my colleagues from industry, labor, and government here today to highlight for this committee the remarkable history of labor-management cooperation in Houston. Clearly, the record of initiative and progress achieved by rail labor and management is nowhere more evident than in Houston, and I commend the members of this committee for their continued encouragement and support of these unprecedented achievements. I would like to present our views on the positive steps taken to date by rail labor and management in Houston and then discuss what we believe are important and far-reaching implications for America's railroads.

The explosive growth in rail and maritime traffic handled during the 1970's by the Port of Houston placed tremendous strains upon the area's rail network. In such an environment, efficient and cost-effective use of facilities, equipment, and manpower is difficult to maintain, and

bottlenecks in key areas quickly affect the ability of the entire rail system to service its customers.

Sparked by growing problems of terminal congestion, car delays, and overtaxed resources, rail labor and management joined together in 1977 in a mutual effort to find ways and means to improve rail operations and service in the city and Port of Houston. At the same time, the railroad community affirmed its obligation to enhance and promote continued safe train operations in an increasingly complex urban environment.

As a direct result of these concerns, the railroads and labor organizations servicing Houston, together with FRA and the Association of American Railroads formed the Houston terminal project. From the outset, this group recognized that the key to improving customer service lies not in adding more equipment, facilities, and manpower, but in taking the difficult steps to get the most out of the considerable resources already at hand.

Clearly, any transportation enterprise succeeds or fails on how well it operates its terminals. It is terminal delay that is largely responsible for unreliable service and it is in the yards and terminals where the greatest productivity gains can occur. The Houston terminal project has faced this challenge squarely and the program of experiments devised by labor and management team members went right to the heart of those problems, and provided lasting solutions to many of them.

I think that the success of the Houston terminal project is due in large measure to the dedication brought to it by the individual labor and management representatives. Their mutual concerns were the cornerstone of these efforts and they achieved an unprecedented level of trust and cooperation based upon respect not only for different points of view, but also that American railroading meet the challenge with innovation and change, not excuses.

Thus, Mr. Chairman, at the time you sponsored what was to become the Houston-Iowa Grain Transportation Task Force, the Houston railroads and their employees were ready. They were ready because they had set aside the parochial differences that can paralyze implementing even the most obvious solutions and had committed themselves to a true joint venture. The steady stream of experiments was a major factor in the success of the project and the creative involvement of parties affected by those experiments assured that fairness and equity were built in right from the start.

The crucial difference assuring the acceptance of the Houston project was the willingness of the project team to work with all interests. That cannot be overemphasized. The project team has demonstrated that instituting change in work assignments, conditions, and service can best be accomplished if the personnel actually doing the work are consulted and are made a part of the process of change. In turn, employees and managers are more willing to suggest and implement improvements in an atmosphere of trust and cooperation.

I am proud of the FRA's catalytic role in supporting these programs. Early on, my staff saw the potential in supporting the Houston project, not only for the clear benefits to Houston railroads, but also for the subsequent expansion of proven labor-management cooperation techniques to other similar urban areas. The unique, positive environment in Houston provided fertile ground for the project and the team's

willingness to share their experience with others has encouraged the formation of similar teams on Conrail and in the New England region.

There is one other unique contribution brought about by the Houston team. The recently installed terminal information exchange system, TIES, was a major breakthrough in assisting management in the movement and distribution of the thousands of freight cars that arrive and depart every day in Houston. FRA provided substantial financial support for the development of that system. We realized that such an information system would have functional applicability in many other areas of the country. I am pleased to note that several major railroads have already begun adapting the TIES approach to certain key terminals. This underscores the positive role that FRA can play in stimulating private sector initiative.

Also, Mr. Chairman, I want to commend the Houston railroads for their cooperative undertaking to develop rail traffic control for the Houston area. This complex project will coordinate most of the line-haul and terminal trackage in Houston, enabling routes to be selected within, from, and to Houston railroads under centralized control. When completed, the project will allow trains entering or leaving Houston to be routed over the full range of trackage, irrespective of ownership, reducing terminal and yard delays, and minimizing the blockage of highway intersections. I am sure this committee can appreciate the complex dispatching protocols, signal system changes, and labor agreements that must be considered, but I am confident that the Houston railroads and their employees can do it.

Mr. Chairman, the FRA is pleased to have the opportunity to summarize these achievements for this committee. I would welcome any questions you may have.

Senator, I presume the questions will come at the end of the presentations by the panel.

Senator JEPSEN. That's correct.

Now, let's welcome Martin Fitzpatrick.

STATEMENT OF MARTIN F. FITZPATRICK, JR., DIRECTOR, OFFICE OF TRANSPORTATION, U.S. DEPARTMENT OF AGRICULTURE

Mr. FITZPATRICK. Mr. Chairman, in all respect, I'm happy to be here. I appreciate the opportunity that you have given me and the others here today to talk about the Houston project. I appreciate the compliments, but without your tenacity and efforts in bringing the funds and the cooperation by the Members of Congress and top Federal policymakers, this project wouldn't have existed. Without the cooperation of Phillip Baumel, who was very instrumental in starting this project, it wouldn't have been a success. Of course, there are many people in Houston who have worked with us and encouraged us and supported us in this project.

I think there's no question that agricultural exports are important to this Nation's economy, and efficient port movements are important to agricultural exports. The health and welfare of our Nation's industry directly impacts the health of our Nation's economy in this way. With the growth of agricultural exports from $7 billion in 1970 to $41 billion in 1980, the proportion of planted cropland being marketed overseas has grown to where the harvest from 1 out of 3 acres is now sold abroad. These export sales account for about a quarter of

all farm income. Relating these export data to national economic measures, an estimated 30,000 jobs are created or maintained for each billion dollars of agricultural exports.

What's more, the multiplier effect of agricultural exports is dramatic. Every dollar of ag exports generates more than $2 of additional domestic activity. Agricultural exports of $41 billion in 1980 contributed a positive trade balance of $23 billion in the agricultural sector, and helped offset our trade deficits in the nonagricultural sectors.

As you know very well, ag exports have decreased over the past few years, and here's why: Increased agricultural exports by other countries and suppliers; sufficient harvests by countries who normally must import production deficits; a depressed global economy affecting such U.S. agricultural customers as Mexico, Poland, Japan, China, West Germany, and many other countries; the Carter grain embargo of 1980; the strength of the U.S. dollar; the subsidization of agricultural grain export products by other world suppliers.

Despite the immediate obstacles to achieving worldwide economic recovery, the long-range prospects for growth in agricultural exports are good. The question you must ask is: Can U.S. farmers supply the growing demand for agricultural products? I believe they can if public policies encourage the expansion of exports, and recognize and support the development of transportation facilities, like you have done, Senator, and others in the city of Houston and the Port of Houston. Transportation's role in agricultural exports is instrumental and extremely important because it keeps the price of exports competitive; that is, it can keep the price of exports competitive if transportation movements are efficient, and, as I mentioned before, the price of our agricultural inputs, much of which we import, at the lowest cost possible.

The Port of Houston is the second largest importer of crude petroleum for refining in the world. In 1980 farmers spent over $6.6 billion on petroleum products to plant, tend, and harvest their crops. In addition, $3 billion was spent on chemicals, $7 billion on fertilizers, and the list goes on and on and on. Without the ability to import many of these products cheaply through our ports, today's farmer could not continue to maintain production costs which are among the lowest in the world. Also, the reason that the farmers are the most efficient producers in the world is because of this activity.

Mr. Chairman, I have many other facts and figures to point out today which are included in my prepared statement. I would like to submit that, as you suggested, for the record, and answer any questions that you might have. But before I conclude, I would just like to again say that the Port of Houston and the activities here are extremely important to agriculture, although today the railroads in Houston note that there is not much corn and wheat moving through the port, as much as there used to be in the late 1970's. The time could come any time soon for increased exports, and we must be ready. I think as our tour today illustrates, the facilities at the Port of Houston are much better to handle a large onslaught of agricultural commodities much better than they were in the late 1970's.

Thank you, Mr. Chairman, for your leadership in this area and I will answer any questions.

[The prepared statement of Mr. Fitzpatrick follows:]

PREPARED STATEMENT OF MARTIN F. FITZPATRICK, JR.

MR. CHAIRMAN, IN 1973 AND AGAIN IN 1979, THE UNITED STATES WAS CALLED UPON TO OVERCOME A STAGGERING WORLD DEFICIT OF FOOD AND FEED GRAINS. FORTUNATELY, THIS COUNTRY HAD SUFFICIENT STOCKS AND THE TRANSPORTATION INFRASTRUCTURE TO SUPPLY THAT INTERNATIONAL DEMAND. WHAT IS REMEMBERED BY MOST OF US HERE TODAY IS THAT THOSE DATES ALSO MARK THE BEGINNINGS OF UNPRECEDENTED CONGESTION AT OUR NATION'S GRAIN PORTS CAUSED BY THAT MASSIVE SURGE OF GRAIN. IT IS THE UFFICE OF TRANSPORTATION'S BELIEF, BASED ON CAREFUL REVIEW OF PAST AND PRESENT CONDITIONS, THAT PROJECTS SIMILAR TO THE HOUSTON TERMINAL PROJECT HAVE MOVED THIS NATION CLOSER TO AVERTING A SIMILAR SITUATION IN THE FUTURE.

TODAY, I WOULD LIKE TO REVIEW SEVERAL ASPECTS OF PORT OPERATIONS FROM THE PERSPECTIVE OF THE AGRICULTURAL PRODUCER WHOSE ABILITY TO SELL OVERSEAS IS PREDICATED ON AN EFFICIENT AND CONSISTENT PORT OPERATION -- NOT ONLY FOR THE

MARKETING OF THEIR PRODUCTS BUT FOR IMPORTING PETROLEUM AND OTHER INPUTS THAT CONTRIBUTE TO THEIR MEANS OF PRODUCTION. IN A LARGER SENSE, THE HEALTH AND WELFARE OF OUR NATION'S FARM INDUSTRY DIRECTLY IMPACTS THE HEALTH OF OUR NATION'S ECONOMY. WITH THE GROWTH OF AGRICULTURAL EXPORTS FROM $7 BILLION IN 1970 TO $41 BILLION IN 1980, THE PROPORTION OF PLANTED CROPLAND BEING MARKETED OVERSEAS HAS GROWN TO WHERE THE HARVEST FROM 1 OUT OF 3 ACRES IS NOW SOLD ABROAD. THESE EXPORT SALES ACCOUNT FOR ABOUT A QUARTER OF ALL FARM INCOME. RELATING THESE EXPORT DATA TO NATIONAL ECONOMIC MEASURES, AN ESTIMATED 30,000 JOBS ARE CREATED OR MAINTAINED FOR EACH BILLION DOLLARS OF AGRICULTURAL EXPORTS.

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WHAT'S MORE, THE MULTIPLIER EFFECT OF AGRICULTURAL EXPORTS IS DRAMATIC. EVERY DOLLAR OF AGRICULTURAL EXPORTS GENERATES MORE THAN $2 OF ADDITIONAL DOMESTIC ACTIVITY. AGRICULTURAL EXPORTS OF $41 BILLION IN 1980 CONTRIBUTED A POSITIVE TRADE BALANCE OF $23 BILLION IN THE AGRICULTURAL SECTOR, AND HELPED OFFSET OUR TRADE DEFICITS IN THE NONAGRICULTURAL SECTORS.

I BELIEVE, THE RATE OF GROWTH OF AGRICULTURAL EXPORTS IN THE PAST DECADE WILL BE VERY DIFFICULT TO ACHIEVE IN THE 1980'S. AFTER DIPPING 11 PERCENT, FROM $44 BILLION TO $39 BILLION BETWEEN 1981 AND 1982, THE VALUE OF FARM EXPORTS IN 1983 COULD BE IN THE NEIGHBORHOOD OF $35 BILLION. THE DECLINE IN THE AMOUNT OF AGRICULTURAL COMMODITIES EXPORTED IS ATTRIBUTABLE TO LOWER

COMMODITY PRICES AS WELL AS A NET REDUCTION IN THE VOLUME OF FOREIGN SALES.

IMPORTANT FACTORS CONTRIBUTING TO DECREASED EXPORTS INCLUDE:

- INCREASED AGRICULTURAL EXPORTS BY OTHER SUPPLIERS;
- SUFFICIENT HARVESTS BY COUNTRIES WHO NORMALLY MUST IMPORT PRODUCTION DEFICITS:
- A DEPRESSED GLOBAL ECONOMY AFFECTING SUCH U.S. AGRICULTURAL CUSTOMERS AS MEXICO, POLAND, JAPAN, CHINA, WEST GERMANY AND MANY OTHER COUNTRIES.
- THE 1980 SOVIET GRAIN EMBARGO,
- THE STRENGTH OF THE U.S. DOLLAR; AND,
- THE SUBSIDIZATION OF AGRICULTURAL GRAIN EXPORT PRODUCTS BY OTHER WORLD SUPPLIERS.

DESPITE THE IMMEDIATE OBSTACLES TO ACHIEVING WORLDWIDE ECONOMIC RECOVERY, THE LONG-RANGE PROSPECTS FOR GROWTH IN AGRICULTURAL EXPORTS ARE GOOD. WORLD POPULATION IS EXPECTED TO GROW AT A RATE OF 1.6 PERCENT PER YEAR TO THE YEAR 2000. THIS FACTOR, ALONG WITH EXPECTED GLOBAL ECONOMIC DEVELOPMENT WILL INCREASE THE DEMAND FOR MORE AND HIGHER VALUE FOOD AND FEED PRODUCTS. CAN U.S. FARMERS SUPPLY THE GROWING DEMAND FOR AGRICULTURAL PRODUCTS? I BELIEVE THEY CAN IF PUBLIC POLICIES ENCOURAGE THE EXPANSION OF EXPORTS, AND RECOGNIZE AND SUPPORT THE DEVELOPMENT OF TRANSPORTATION FACILITIES. TRANSPORTATION'S ROLE IS IMPORTANT BECAUSE IT KEEPS THE PRICE OF EXPORTS COMPETITIVE AND, AS I MENTIONED BEFORE, THE PRICE OF OUR AGRICULTURAL INPUTS -- MUCH OF WHICH WE IMPORT -- AT THE LOWEST COST POSSIBLE.

THE PORT OF HOUSTON IS THE SECOND LARGEST IMPORTER OF CRUDE PETROLEUM FOR REFINING IN THE WORLD. IN 1980, FARMERS SPENT OVER $6.6 BILLION ON PETROLEUM PRODUCTS TO PLANT, TEND AND HARVEST THEIR CROPS. IN ADDITION, $3.0 BILLION WAS SPENT ON CHEMICALS, $7.0 BILLION ON FERTILIZERS, AND THE LIST GOES ON. WITHOUT THE ABILITY TO IMPORT MANY OF THESE PRODUCTS CHEAPLY THROUGH OUR PORTS, TODAY'S FARMER COULD NOT CONTINUE TO MAINTAIN PRODUCTION COSTS WHICH ARE AMONG THE LOWEST IN THE WORLD.

A RECENTLY RELEASED U.S. INTERNATIONAL TRADE COMMISSION REPORT, ENTITLED TRANSPORTATION COST OF U.S. IMPORTS, EXAMINES HOW TRANSPORTATION COSTS,

AS BARRIERS TO TRADE, HAVE CHANGED IN RECENT YEARS. ALTHOUGH THIS REPORT FOCUSED ONLY ON U.S. IMPORTS, AN IMPORTANT FINDING WAS THAT DECLINING INTERNATIONAL TRANSPORTATION COSTS HAVE CONTRIBUTED SIGNIFICANTLY TO THE GROWTH OF U.S. TRADE.

FORTUNATELY, AT THE PRESENT TIME, BOTH INTERNATIONAL AND DOMESTIC TRANSPORTATION SERVICES ARE IN ABUNDANT SUPPLY AND TRANSPORTATION RATES ARE THE LOWEST IN SOME TIME. THE DEREGULATORY NATURE OF THE STAGGERS RAIL ACT OF 1980 INFUSED BOTH COMPETITION AND CONTRACTING INTO THE RAIL TRANSPORT MARKET. THESE FACTORS, AS WELL AS A LARGE MEASURE OF EXCESS CAPACITY WHICH EXISTS IN ALL MODES TODAY, HAVE ENABLED SHIPPERS TO OBTAIN SOMEWHAT LOWER RATES FOR THEIR EXPORT SHIPMENTS. NEVERTHELESS, AS GLOBAL AND DOMESTIC ECONOMIC CONDITIONS IMPROVE AND TRADE INCREASES, SHIPPING ANALYSTS EXPECT THAT TRANSPORTATION RATES WILL AGAIN INCREASE.

TO THIS POINT, I HAVE TESTIFIED AS TO THE IMPORTANCE OF OUR AGRICULTURAL EXPORTS AS A REVENUE PRODUCER BOTH FOR THE AMERICAN FARMER AND OUR NATION AS A WHOLE. THE IMPORTANCE OF LOW COST IMPORTS HAVE ALSO BEEN CITED.

IN REFERRING TO LOW INTERNATIONAL AND DOMESTIC TRANSPORT RATES AS A FACILITATOR TO OUR EXPORT SUCCESS, I CAN NOT STRESS ENOUGH THE IMPORTANCE OF THE LINK BETWEEN THE TWO--PORT OPERATIONS. TO OPERATE EFFICIENTLY, RAILCARS, BARGES, AND TRUCKS MUST BE PLACED FOR UNLOADING IN CONCERT WITH THE BERTHING OF THE OCEAN VESSEL. COORDINATION AND TIMING ARE CRITICAL. A SMOOTHLY OPERATING PORT TERMINAL OPERATION IS A NECESSITY GIVEN THE CONFINED SPACES IN WHICH TRANSPORT EQUIPMENT AND THE GRAIN SHIPMENTS ARE CHANNELLED.

IN REMEMBERING THE 1973-74 AND 1979-80 CONGESTION AT HOUSTON AND OTHER GRAIN LOADING PORTS, I DO NOT MEAN TO SUGGEST WE WILL AGAIN FACE CONGESTION OF SUCH MAGNITUDE. THOSE TIMES SHOULD BE RECALLED AS EXAMPLES OF THE COSTS INEFFICIENCY AND LACK OF COORDINATION MAY HAVE ON ALL EXPORT PARTICIPANTS -- CARRIER, ELEVATOR AND FARMER. AT THE SAME TIME, WHEN FOREIGN DEMAND PEAKED, HIGH PROFIT MARGINS, WHICH SHOULD HAVE BEEN DISTRIBUTED AMONG ALL PARTICIPANTS, WERE DIMINISHED DUE TO CONGESTION. ALTHOUGH FORTUNATELY WE MAY NEVER AGAIN EXPERIENCE THAT SAME DEGREE OF CONGESTION, THE EXISTENCE OF ANY INEFFICIENCY AT OUR PORTS TRANSLATES INTO DECREASED DOMESTIC PROFITS.

TWO STUDIES ON THE PORT OF HOUSTON BY RESEARCHERS AT TEXAS A&M IN JULY 1979 AND JULY 1982 ESTIMATED COSTS OF CONGESTION FOR GRAIN CARRIERS.1/ THE 1979 STUDY OF BOTH RAIL AND TRUCK CONGESTION INDICATES THAT COSTS FOR BOTH MODES INCREASE SUBSTANTIALLY AS PORT ELEVATOR ANNUAL THROUGHPUT EXCEEDS 125 MILLION BUSHELS. COSTS WERE ESTIMATED TO BE APPROXIMATELY 2.0 CENTS PER BUSHEL AT AN ANNUAL VOLUME OF 125 MILLION BUSHELS, BUT WERE SHOWN TO INCREASE LINEARLY TO 11.0 CENTS PER BUSHEL AT AN ANNUAL VOLUME OF 180 MILLION BUSHELS AT A REPRESENTATIVE GULF ELEVATOR.

THE 1982 STUDY ON TRUCK CONGESTION IS PARTICULARLY INTERESTING BECAUSE OF ITS STATED IMPLICATIONS. ALTHOUGH THE FINDING ON CONGESTION COSTS (TRANSLATED FROM TRUCK WAITING TIMES) APPEARED TO BE SUBSTANTIAL ENOUGH TO MERIT

1/ "EFFICIENT INTERFACING OF THE TRUCK-TO-SHIP INTERMODAL GRAIN TRANSFER SYSTEM: PORT OF HOUSTON", STEPHEN FULLER AND MECHEL PAGGI, SOUTHERN JOURNAL OF AGRICULTURAL ECONOMICS, JULY 1979; AND "INTERMODAL TRANSFER EFFICIENCY AT GRAIN PORTS: AN ANALYSIS OF TRAFFIC CONGESTION", STEPHEN FULLER, ET AL., NORTH CENTRAL JOURNAL OF AGRICULTURAL ECONOMICS, VOL. 4, NO. 2, JULY 1982.

IMPROVEMENTS AT THAT TIME, PORT ELEVATORS ARE OFFERED FEW INCENTIVES TO INCREASE CAPACITY. THE REASONING IS THAT OFTEN PORT ELEVATORS DON'T INTERNALIZE THOSE CONGESTION COSTS BECAUSE OF THE CURRENT MARKET STRUCTURE. THE RESEARCHERS HYPOTHESIZE; AND I QUOTE:

> ...THAT MOST OF THE CURRENT CONGESTION COST IS BORNE BY THE FARMER VIA LOWER GRAIN PRICES. WITH CURRENT MARKET ORGANIZATION, EXPORTERS APPEAR TO BE PRICE-TAKERS. THAT IS, THE PRICE NEGOTIATED BETWEEN EXPORTER AND COUNTRY ELEVATOR IS DETERMINED PRIMARILY BY THE EXPORTER. TRUCKS WILL NOT PARTICIPATE IN THE COUNTRY ELEVATOR TO PORT TERMINAL HAUL WITHOUT ADDITIONAL COMPENSATION FOR WAITING BECAUSE NONCONGESTED HAULS ARE AVAILABLE. COUNTRY ELEVATORS ARRIVE AT THE FARM PRICE BY SUBTRACTING THEIR MARGIN AND THE TRUCK RATE TO PORT ELEVATOR FROM EXPORTERS PURCHASE

PRICE. CONSEQUENTLY, FARM PRICE REFLECTS THE COST OF CONGESTION. THE EXCESSIVE CONGESTION PERSISTS BECAUSE OF A MARKET ORGANIZATION THAT ALLOWS THIS COST TO BE PASSED ON AND NOT INTERNALIZED--A MISALLOCATION OF RESOURCES.

OTHER COSTS, SOME QUITE SUBSTANTIAL, OCCUR DUE TO CONGESTION AT PORT. SHIP OWNERS ALLOW VESSEL CHARTERERS A NUMBER OF DAYS BEFORE CHARGING DEMURRAGE, USUALLY BASED ON HISTORICAL AVERAGE LOADING TIMES. THE COST OF SHIP DELAYS DUE TO LATE OR NONARRIVAL OF SPECIFIC GRADES OR TYPES NEEDED TO COMPLETE A LOAD MAY FALL ON EITHER THE CHARTERER OR SHIP OWNER. THOSE COSTS OFTEN RANGE FROM $6,000 TO $10,000 PER SHIP PER DAY.

ANOTHER FACTOR OF TOTAL CONGESTION COSTS IS THE COST TO OTHER INDUSTRIES IN THE PORT AREA. THE PORT TERMINAL RAILROAD ASSOCIATION IS BASICALLY A "U" SHAPED STRUCTURE BENDING AROUND THE HOUSTON SHIP CHANNEL. AT THOSE POINTS WHERE ONLY ONE TRACK EXISTS, BIDIRECTIONAL MOVEMENT IS IMPOSSIBLE. AS THE VOLUME OF TRAFFIC INCREASES, THE ABILITY OF THE TERMINAL TO PLACE CARS AT OTHER LOCATIONS DIMINISHES DUE TO LACK OF MOVING SPACE--FOR EXAMPLE, A PASSING TRACK BEING USED TO STORE FULL OR EMPTY CARS. WHILE SOME STUDIES HAVE BEEN MADE ON CERTAIN ASPECTS OF GRAIN CONGESTION, NO STUDY HAS COMPREHENSIVELY ESTIMATED THE COST TO ALL INDUSTRIES WHOSE PRODUCTION AND MARKETING MAY BE AFFECTED BY CONGESTION.

THE PROBLEMS CITED ABOVE ARE NOT PECULIAR TO HOUSTON--THEY EXIST TO SOME MEASURE IN EACH OF OUR NATION'S PORTS. WHAT IS DIFFERENT ABOUT THE PORT OF HOUSTON IS THE METHODS BY WHICH HOUSTON HAS CHOOSEN TO COMPREHENSIVELY APPROACH THEIR PROBLEMS. THE APPROACH HAS BEEN A JOINT UNDERTAKING OF RAIL LABOR, RAIL MANAGEMENT, AND THE FEDERAL GOVERNMENT. ALL HAVE PROVIDED RESOURCES, EXPERTISE, AND PROBABLY MORE IMPORTANT, COOPERATION TO INCREASE THE EFFICIENCY OF THE PORT'S OPERATION. STRUCTURALLY EMBODIED IN THE HOUSTON TERMINAL PROJECT AND ADVISED BY THE HOUSTON/IOWA GRAIN COMMITTEE, A TEAM OF INDIVIDUALS HAS INVESTIGATED VARIOUS CAPITAL AND OPERATIONAL IMPROVEMENTS AND SUGGESTED MANY CHANGES.

AMONG THOSE RECOMMENDATIONS THAT HAVE BEEN ACCEPTED AND ACTED UPON AND THAT DIRECTLY OR PERIPHERICALLY AFFECT THE FLOW OF GRAIN TO FOREIGN CUSTOMERS ARE EXPERIMENTS THAT:

- REDUCED TURNAROUND TIME BY A TOTAL OF 86 HOURS FOR BOTH CARS AND EQUIPMENT FROM UNION EQUITY TO BELLEVILLE, TEXAS,
- REDUCED TERMINAL HANDLING FROM 8 TO 4 MOVES, AND
- ELIMINATED PASSING THROUGH 3 CLASSIFICATION YARDS FOR AN ESTIMATED SAVINGS OF $880,000 PER YEAR GIVEN 1981-82 EXPORT LEVELS.

CAPITAL IMPROVEMENTS OF OVER $19.8 MILLION BY PRIVATE FIRMS IN 1981-82 TO EXPAND PHYSICAL CAPACITY AND TO ACCOMMODATE ALTERNATE METHODS OF HANDLING GRAIN INCLUDE:

- THE RENOVATION OF HOUSTON BELT AND TERMINAL'S STETTEGAST YARD
- PTRA'S RENOVATION OF ITS EXISTING MAINLINE, CONSTRUCTION OF A SECOND MAINLINE BETWEEN CARGILL AND PENN CITY YARD AND THE CONSTRUCTION OF A NEW 75 CAR SIDING; AND
- THE CONSTRUCTION OF 8 NEW TRACKS AT CARGILL TO INCREASE WORKING CAPACITY AND, CONSEQUENTLY, UNLOAD CAPACITY AT THAT ELEVATOR.

OTHER IMPROVEMENTS SUCH AS THE TERMINAL INFORMATION EXCHANGE SYSTEM AND A RECOMMENDATION FOR AN IMPROVED RAIL TRAFFIC CONTROL SYSTEM, ALL ARE DESIGNED TO CONTRIBUTE TO INCREASED GRAIN FLOW EFFICIENCY AND A DECREASING OF THE CHANCES FOR SERIOUS CONGESTION PROBLEMS IN THE FUTURE. WHILE SOME IMPROVEMENTS AT HOUSTON HAVE YET TO BE MADE, WE ARE ENCURAGED BY THE WORK COMPLETED SO FAR.

WE, AT THE DEPARTMENT OF AGRICULTURE, ARE WORKING TO EXPAND U.S. EXPORTS TO TAKE ADVANTAGE OF THE IMPROVEMENTS AT HOUSTON. THE OFFICE OF TRANSPORTATION CURRENTLY PROVIDES TWO PERIODICALS TO THE PUBLIC TO REPORT ON THE DOMESTIC AND INTERNATIONAL EXPORT-RELATED TRANSPORTATION SITUATION--THEY ARE THE "GRAIN TRANSPORTATION SITUATION" REPORT AND "THE WORLD AGRICULTURAL TRANSPORTATION REPORT". IN ADDITION, OUR OFFICE IS SUPPORTING A STUDY TO RESEARCH THE POTENTIAL OF TRANSPORTATION'S ROLE IN THE NEW Export Trading Company Act of 1982. RECENTLY, UT RESEARCHERS WERE BUSY DOCUMENTING FOR OUR OWN INTERNAL USE, THE METHODS BY WHICH GRAIN AND RAIL COMPANIES MANAGE AND KEEP INFORMED OF THE GRAIN PIPELINE FROM INTERIOR POINTS TO HOUSTON GRAIN ELEVATORS. WE FOUND INCREASED USE OF COMPUTERIZATION AND COOPERATION AMONG CARRIERS AND GRAIN COMPANIES EFFECTIVE METHODS NOT ONLY TO INCREASE CONTROL AND EFFICIENCY OF

THE GRAIN EXPORT TRAFFIC TODAY BUT ALSO A CONTINUOUS PROCESS TO AVERT THE POTENTIAL FOR COSTLY CONGESTION IN THE FUTURE. IT IS OUR BELIEF THAT WHILE GRAIN CARRIERS AND MERCHANDIZERS MAY FIND IMMEDIATE BENEFITS IN THESE IMPROVEMENTS, THE AMERICAN FARMER WILL IN THE END BE THE PRIME BENEFICIARY.

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Senator JEPSEN. Thank you, Mr. Fitzpatrick.

Mr. Baumel, please proceed.

Mr. BAUMEL. Thank you, Senator Jepsen.

Senator JEPSEN. I'd like to take this opportunity at this time to thank you for accepting and assuming the chairmanship of this Houston/Iowa Grain Transportation Committee. I remember when it was first initially discussed, and we talked to the staff at Iowa State University and discussed it with folks here in Houston. I know that you have many things that you take part in and many things that you counsel and work with. With as much as you do to assist in areas other than just your specific role at the university and taking this task on and being successful with it, is a great testimony to your reputation, which is one of getting things done. I appreciate that and thank you on behalf of everybody for your work.

STATEMENT OF C. PHILLIP BAUMEL, CHARLES F. CURTISS DISTINGUISHED PROFESSOR OF AGRICULTURE AND EXTENSION ECONOMIST, IOWA STATE UNIVERSITY, AMES

Mr. BAUMEL. Thank you, Senator. It's been my pleasure.

In 1973 three graduate students and I completed an analysis to determine the optimal method of moving grain out of a small area around Fort Dodge, Iowa. It was financed by shippers and the Federal Railroad Administration. It indicated that farmers would receive higher net prices for their grain if unit grain trains were utilized to move grain direct to export ports. Since that study, approximately 150 elevators in Iowa have made major investments to upgrade their facilities to ship grain by unit trains. Today, just 10 years later, unit trains are the standard method of moving grain by rail in almost all surplus grain producing States in this country. Rate reductions of 3 to 25 cents per bushel are available for utilization of unit grains. Generally, part of these rate savings are passed on to farmers in the form of higher grain prices.

Through much of the decade of the 1970's, agriculture suffered from severe railcar shortages. The Rural Transportation Advisory Task Force, which was formed by Congress, suggested that unit trains would be one method of improving the utilization of rail equipment to increase the car supply.

While most railroad companies operating in grain producing regions published low-cost unit grain train rates and farmers and country elevators made the required investments in facilities to load the trains, the concept was continually plagued by problems of delays and breakups at most export ports. Most export elevators and the supporting rail facilities were designed for the single car system, not unit trains. At Houston, for example, loaded trains were broken up before they moved to the export elevators. As they were emptied, they moved out in piecemeal fashion, and moved up country to be reloaded where they would have to wait days and sometimes weeks for all the cars to come back, to be reassembled into unit trains for reloading.

Failure to maintain the integrity of the trains resulted in delays at the export elevators and the returning of cars at almost all export ports. These delays were particularly painful to the grain shippers because during this period of time, grain car shortages reduced the

amount of grain that they could haul, and second, it forced shippers to lease cars which increased the cost of getting grain to export ports.

In response to shipper complaints about long unit grain train turnaround, you, Senator Jepsen, made a firsthand visit of the Houston rail terminal and export elevator facilities. You concluded that any substantial improvements in unit train handling require higher levels of communication, cooperation, and coordination among all parties in the grain transportation network.

I remember shortly after that you organized a meeting here in Houston with the assistance of rail labor, management, and the Houston Port terminal personnel to bring together leaders of railroads, port elevators, unions, country elevators, farm organizations, and Government agencies to identify the problems and to develop a strategy to maintain or restore the integrity of unit trains at export ports. This meeting, which was held here in Houston in 1980, resulted in the formation of the Houston-Iowa Grain Transportation Committee. I'd like to take the time just to name individual members of that committee: Freeman Anderson, who is general chairman of UTU, Port Terminal Railroad Authority; Richard Barr, the Iowa Railway Association; myself; James Boone, the Federal Railroad Administration; Willard Clarkson, AGRI Industries; Pat Collins, Houston terminal project; Don Dingle, The ADD Systems; Martin Fitzpatrick, USDA; Merlyn Groot, the American Soybean Association; Frank Hemmen, Cargill; Dan Joiner, Houston terminal project; J. D. Kirtley, Port Terminal Railroad Authority; Jack Lamkin, Texas A&M University; Charles Little, UTU general chairman, Houston Belt & Terminal Railway Co.; Harlan Ritter, HB&T; Terry Voss, United Purchasers Association in Des Moines; and Ted Walters, Port of Houston Authority.

The activities of this committee, with the assistance of the Houston terminal project rail and labor management and the grain industry, were oriented to developing approaches for solving the problems of maintaining the integrity of the unit trains. Three major projects were identified and evaluated. I won't go through those projects other than to say that the committee in presenting those projects to railroad labor and management and the grain industry, viewed them as a set of alternatives to be considered for improving the efficiency of the unit train operations. While the three projects were not fully implemented because of capital problems, the concept of improving unit train operations was adopted by these groups. Several alternative investments and operational changes have been made which have resulted in diverting portions of all Houston traffic away from the north yard. Moreover, significant investments have been made in PTRA track and port elevator siding to handle the unit trains. Other people will detail those changes later.

While I have worked with grain shippers and grain gathering railroads for the past 15 years, this was the first opportunity that I have had to work with export port problems. This experience has led me to the following conclusions: First, a systems approach is a very effective method of dealing with export port and terminal problems and solutions. A multidisciplinary approach with the Houston-Iowa Grain Transportation Committee helps to identify problems and alternative solutions by helping decisionmakers see the problems from a broad perspective rather than from the narrow perspective of their own indi-

vidual operations. It is an effective method of introducing change by focusing on the benefits of change rather than trying to place blame for the problems. It generates more acceptable alternative solutions than if each part of the system attempts to solve their own problems.

The second conclusion that I came to is that the improvements at the Port of Houston are of great value now to grain shippers and other shippers and will be of even greater value in the future, by reducing the cost of exporting grain and providing more competition among export ports and railroads for grain exports.

Three, the combined railroad labor and management, shipping public and government approach to reducing congestion and costs of rail transportation should be implemented at other gateways and export ports. Finally, this was my first opportunity to work with terminal railroad management and labor and export grain elevator representatives. I learned these groups can and will set aside their parochial interests and work together to solve industry-wide problems. I enjoyed the experience very much.

[The prepared statement of Mr. Baumel follows:]

Prepared Statement of C. Phillip Baumel

My name is C. Phillip Baumel. My title is Charles F. Curtiss Distinguished Professor of Agriculture and Extension Economist at Iowa State University, Ames, Iowa. This testimony is based on a continuing research-extension effort at Iowa State University supported by Federal funds through Smith-Lever and Hatch Act appropriations and by other federal and state funds.

In 1973, three graduate students and I completed an analysis to determine the optimal method of moving grain out of a 6 1/2 county area around Fort Dodge, Iowa. The results of this analysis which was financed by shippers and the Federal Railroad Administration, indicated that farmers would receive higher net prices for their grain if unit grain trains were utilized to move grain direct to export ports. Since the completion of that study, approximately 150 elevators in Iowa have made major investments to upgrade their facilities to ship grain by unit trains. Today, unit trains are the standard method of transporting grain by rail in Iowa as well as in most surplus grain producing states including Illinois, Indiana, Ohio, Michigan, Minnesota, North Dakota, Montana, Washington, Nebraska and Kansas. Rate reductions for unit grain trains range from approximately 3 to 25 cents per bushel below single car rates depending on the size of the unit train, the distance to market and the origin of the shipment. Generally, part of these rate savings are passed on to farmers in the form of higher grain prices.

Through much of the decade of the 1970s, agriculture suffered from severe rail car shortages. In discussing the continuing rail car shortage, the final report of the national Rural Transportation Advisory Task Force--which I had the privilege to serve on--stated:

> "The task force believes that another method of improving rail equipment utilization is through the use of multiple-car and unit-grain trains. This concept, which is being used extensively in the corn-soybean region of the Midwest, often results in turnaround times 40-50 percent faster than single car shipments. Multiple-car and unit-train shipping often result in higher prices to farmers. These higher prices are possible through reduced rates and the merchandising advantage of selling larger amounts of grain. Higher prices generally more than offset added costs of hauling grain to subterminals. Multiple car shipments and unit trains provide a method that grain producers can use to adjust to branchline abandonment."[1/]

While most railroad companies operating in grain producing regions published low-cost unit grain train rates and farmers and country elevators made the required investments in facilities to load unit trains, the unit train concept was plagued by problems of delays and break up at most export ports. Most export elevators and the supporting rail facilities were designed for a single car system, not unit trains. At Houston, for example, inbound loaded trains were usually broken up and moved to the export elevators in a piecemeal fashion. The outbound empty rail cars were then moved out of Houston piecemeal as they were released by the export elevators. Failure to maintain the integrity of the unit trains resulted in delays in getting the loaded cars to the export elevator and in major delays in returning the all empty cars to the country elevators for reassembly into unit trains and reloading. Similar unit train breakups and delays occured at most other export ports. These delays were particularly painful to Iowa grain shippers for two reasons. First, during the periods of severe rail

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[1/] United States Department of Agriculture and United States Department of Transportation "Agricultural Transportation Services: Needs, Problems, Opportunities." The Final Report of the Rural Transportation Advisory Task Force, Washington, DC January, 1980.

car shortages, delays caused by port congestion reduced the amount of grain that could be hauled in each rail car. Secondly, the continuing rail car shortages forced shippers to lease cars to enable them to move their grain to market. By 1979, shippers had leased or purchased almost half of the existing covered hopper rail car fleet. Therefore, the delays not only reduced the amount of grain that could be transported but also increased shipper costs of owning or leasing these rail cars.

In response to continued Midwest shipper complaints about long unit grain train turnaround times caused by delays and breakup of the trains at export ports, Senator Roger Jepsen (R-Iowa) made a firsthand inspection of the Houston Rail Terminal and the Port of Houston export elevator facilities. The conclusions from this inspection were:

(1) That the dynamic Houston economy was taxing the existing rail facilities to the limit.

(2) The initial design of the export elevators was based on a single car system. Capital and space limitations at export grain elevators eliminated the possibility of installing balloon or loop type rail siding that has made unit coal train unloading at steam generating electric plants very efficient.

(3) Any substantial improvements in unit train handling require higher levels of communication, cooperation and coordination among all parties involved in the grain transportation network.

Following this on site inspection, Senator Jepsen, along with Houston rail labor and management officials, and Houston Terminal project personnel, organized the Houston-Iowa grain transportation conference to bring together leaders from railroads, export elevators, labor unions, Iowa country elevators, farm organizations and government agencies to identify the problems

that affect the efficiency of unit trains and to develop a strategy to maintain or restore the integrity of unit trains at export elevators. This conference, held February 8-9, 1980, resulted in the formation of the Houston-Iowa Grain Transportation Committee. The original members of this committee were:

Freeman Anderson	United Transportation Union General Chairman, Port Terminal Railroad Authority	Houston, TX
Richard Barr	Iowa Railway Association	Des Moines, IA
C. Phillip Baumel (Co-Chairman)	Iowa State University	Ames, IA
James Boone	Federal Railroad Administration	Washington, DC
Willard Clarkson	AGRI Industries	Des Moines, IA
P.B. Collins	Houston Terminal Project	Houston, TX
A. D. Dingle	ADD Systems	San Francisco, CA
Martin Fitzpatrick	U.S. Department of Agriculture Office of Transportation	Washington, DC
Merlyn Grote	American Soybean Association	Manson, IA
Frank Hemmen	Cargill	Houston, TX
D. K. Joiner	Houston Terminal Project	Houston, TX
J. D. Kirtley	Port Terminal Railroad Authority	Houston, TX
Jack Lamkin (Co-Chairman)	Texas A&M University	College Station, TX
Charles Little	United Transportation Union General Chairman, Houston Belt and Terminal Railway Company	Houston, TX
Harlan Ritter	Houston Belt and Terminal Railway Company	Houston, TX
Terry Voss	United Purhasers Association	Des Moines, IA
Ted Walters	Port of Houston Authority	Houston, TX

The activities of the Houston-Iowa Grain Transportation Committee, with the assistance of the Houston Terminal Project personnel, and railroad labor and management and the grain industry, were oriented to developing joint and

cooperative approaches to solving the problem of maintaining or restoring the integrity of unit grain trains. The Houston-Iowa Grain Transportation Committee held numerous meeting and on-site inspections of the Houston rail terminal and export elevator facilities. Three specific capital improvements proposed by Houston railroad executives were selected for detailed benefit-cost analyses. Railroad operating personnel were asked to review the three possible projects to insure that each was operationally feasible and would address the issue of unit grain train integrity. These three improvement projects were:

1. Ordinance Depot Yard

   The proposed Ordinance Depot Yard project was designed to rebuild two long tracks to hold loaded unit trains destined for one export elevator and to construct four new tracks of shorter lengths to rebuild the empty unit trains. Regrouping the empty cars into unit trains near the export elevator would minimize the difficult task of rebuilding the trains at the congested PTRA North Yard.

2. North Yard Bypass

   Unit grain trains from the ATSF, MP and FWD destined to three Houston export elevators moved through the PTRA North Yard. The North Yard was frequently congested and does not have sufficient number of tracks to hold 75-car trains. The proposal was to build a bypass which would reroute both loaded and empty grain trains around the North Yard. This would enable the grain trains to avoid the congested North Yard and at the same time reduce the North Yard congestion by taking all unit grain train traffic out of the yard.

3. Southern Pacific Capital Improvements

The proposed Basin Yard improvement was to add four tracks each holding 80 cars or four unit trains. These four tracks would hold the projected unit grain train volume into the Agri Export Elevator with a maximum of 12 hours from arrival in Houston to placement at the elevator and a maximum of 12 hours from the time of release of the empty train to departure from Houston.

The identification of the causes of the unit grain train problem and the proposed investment projects were viewed by the multi-disciplinary Houston-Iowa Grain Transportation Committee as one set of alternatives to improve the efficiency of unit grain train operations through the Port of Houston. The identified problems and the three proposed projects were presented to Houston railroad labor and management and to grain industry officials for their own evaluation and to serve as a catalyst to stimulate discussions of other alternatives. The report generated much discussion within and among railroad management and labor and export elevator officials. While the three proposals were not fully implemented because of capital problems at the time, the concept of improving unit train operations was adopted by these groups. Several alternative investments and operational changes have been made which has resulted in diverting portions of all Houston rail traffic away from the PTRA North Yard. Moreover, significant investments have been made in PTRA track and port elevator siding to handle unit grain trains. The details of these investment and operational changes will be presented by others today.

While I have worked with grain shippers and grain originating railroads in helping to solve grain gathering problems for the past 15 years, working with the Houston-Iowa Grain Transportation Committee was the first

opportunity I had to work with export port problems. This experience has led me to the following conclusions:

I. A systems approach is a very effective method of dealing with export port and terminal problems and solutions. A multi- disciplinary approach to identifying problems, the implications of these problem and alternative solutions:

   a. Helps decision-makers see the problems from a broad systemwide perspective rather than from the narrow perspective of individual operations.

   c. Is an effective method of introducing change by focusing on the benfits of change rather than trying to place blame for the problems.

   b. Generates many more acceptable alternative solutions than if each part of the system attempts to solve their own problems.

II. The solutions that have been implemented at the Port of Houston are and will continue to be of great value to grain shippers. At the present time, grain exports are down sharply from 1980 levels. Overcapacity of the barge system, combined with the reduction in grain exports, has led to diversion of significant amounts of grain exports from rail to barge. However, when grain exports return to 1980 levels or more as they are almost certain to do, barge rates will rise to levels that will shift grain shipments back to rail to Houston. The improvements in the Port of Houston will be of even greater value to shippers by reducing the cost of exporting grain and by providing even more competition among railroads and export ports for grain exports.

III. The combined railroad labor and management, shipping public and government approach to reducing congestion and costs of rail transportation should be implemented at other gateways and export ports.

IV. This was my first opportunity to work directly with terminal railroad management and labor and export grain industry representatives. I learned that these groups can and will set aside their parochial interests and work together to solve industry-wide problems. I enjoyed the experience of working with them.

Senator JEPSEN. Thank you, Mr. Baumel. You know, when I come into this group, it takes me a few seconds to reconcile all the Dans. We have a Dan Collins, Sr., and a Dan Collins, Jr., and a Dan Joiner, and it's all very dandy, but I have to get them all placed again. And sometimes we'll continue with the Fitzpatricks and the Fitzgeralds and so on. It's a good thing we've got an Anderson and a Jepsen involved, so we can keep some balance.

Dan Joiner, you have had a great deal of vision, but that is not what you've had the most of. From the very beginning, you've had enthusiasm. When I first met you, I have to confess, I thought, well, this is probably just a facade, a pep rally type thing, to try to get some money down here. Some people do that with the Government. But you didn't. You always kept being enthusiastic all the way through; in fact, you picked up speed. I have grown to admire that. I felt and recognized the catalytic role that you've played to keep this thing moving in all areas.

When I saw the switchboards light up with the computers this morning, I did remember and reflect on the first time we visited Houston. I think the first time I saw you, you kept talking about the way you were going to have computers do this and that, and someday computers were going to be pressing the button. All the folks were shifting cars around and looking out of the windows and talking on the telephones when I was down here that first time. It all came to pass. I like your style, Dan Joiner.

You are on deck. You may proceed in any way you so desire.

Mr. JOINER. Thank you very much, Senator Jepsen. I would like to say that the first time I met you, I was working with Buzz and Martin Fitzpatrick, and when we got to the airport to pick you up, I said, "Buzz, how will I know the Senator when all the businessmen get off the airplane?" And he said, "He'll be the one that looks like a Senator." I think that would be an accurate description.

Senator JEPSEN. Thanks a lot.

STATEMENT OF D. K. JOINER, PROJECT DIRECTOR, HOUSTON TERMINAL PROJECT

Mr. JOINER. Mr. Chairman, I appreciate this opportunity to describe some of the activities of the Houston terminal project in helping to foster cooperation between labor and management and between rail carriers in the Houston gateway.

In multicarrier gateways such as Houston, many of the opportunities for improving transportation service require the approval of several railroads and several labor organizations. As you can appreciate, whenever a proposal requires the support of different organizations with different objectives, it may be difficult to secure all the necessary approvals. In this environment, the Houston terminal project acts as a catalyst to secure the necessary agreements to reduce the time to implement these improvements.

In 1977, rail labor and management in Houston, recognizing the need for greater cooperation, established the Houston terminal project with the support of the Federal Railroad Administration and Association of American Railroads. I serve as Director and Charles Little, an alternate vice president of the UTU, is codirector. Our activities

are directed by a steering committee composed of top management representatives of the Houston Belt & Terminal Railroad, Port Terminal Railroad Association and the Southern Pacific Railroad and elected union officials from BRAC and the United Transportation Union.

The overall objective of the Houston project is to improve rail operations in the Houston gateway in order to provide better rail transportation service and to increase the effective capacity of the rail network. Initially, the primary focus of the Houston project was on developing and implementing experimental changes in rail operations that involved labor agreements. From this single primary approach, our focus has evolved into a broader spectrum of approaches that also includes improved communications and cooperation between labor and management, innovative training programs, traffic flow studies, consolidation studies, transfer of systems technology and coordination between railroads. In addition, we have been designated as the liaison between the Houston railroads and various Federal, State, and local governmental agencies.

In the last few years, a spirit of cooperation has evolved in the Houston gateway, not only between labor and management, but between railroads. In this climate, it has been possible to bring about changes in operations with the cooperation of labor. Before a change involving labor agreements is made permanent, it is tried on an experimental basis with specified start and stop dates. Once implemented, a labor-management monitoring committee is established to review ongoing operations. Following completion of the experiment, an evaluation report including a quantitative measurement of the impact on operations is prepared for use by both labor and management. Then if both parties are in agreement, the change is made permanent. Examples of these experiments that resulted in permanent changes will be described later in the testimony of Mr. Handley, general manager of the Port Terminal Railroad Association.

In measuring the impact on operations, we use a terminal performance measurement system which analyzes the speed and reliability of car movements in the Houston gateway. This system was developed by project staff with the support of outside consultants. The computer processing which was performed by the Association of American Railroads is now processed by the Houston Belt & Terminal Railroad. This transfer of responsibility provides the opportunity to expand the use of car movement data to include monitoring of traffic flows to and from industry, including port elevators.

An analysis of car movements in the Houston gateway indicated that cars were being delayed because of the lack of accurate information. As a result, as has been mentioned previously, the project recommended that a terminal information exchange system, or TIES, be implemented to improve the information systems that support operations. TIES, which involved the transfer of systems technology, was implemented to improve the information systems that support operations on the PTRA and has contributed to the increase of the effective capacity of the PTRA and the Houston gateway.

The second major improvement in information support was the establishment of a Transportation Information Center to review and correct the billing instructions on cars moving to Houston before they

reach the gateway. As a result, cars which were formerly delayed because of inadequate information are now handled according to established schedules. And I might add it also created 10 or 11 new clerical positions on the Houston Belt & Terminal and Southern Pacific and Port Terminal Railroad Association.

On the human side, we have been very active with local labor and management in developing innovative approaches to alcohol and drug problems and worker training. The Port Terminal Railroad Association recently completed pilot safety training programs for their operating and maintenance personnel using computers and videodiscs as the training delivery systems. An enlarged program of this kind is presently before DOT for their consideration.

Another example of a multicarrier project in which we have been involved is the rail traffic control system, which has previously been mentioned, which provides for centralized control of all train and transfer movements within the Houston gateway, similar to that of an airport. When fully implemented, rail traffic control will reduce train delays and provide alternate routing when a main route is congested. This capability will be extremely valuable when the gateway is faced with a heavy surge of grain traffic.

Because of the complex organizational relationships that exist in rail gateways, it is my belief that labor-management projects can be utilized as effective means for addressing solutions to problems that traditionally have developed because of these relationships.

The progress that has been achieved in Houston represents the combined input of many labor, management, and governmental officials. The accomplishments that will be discussed today reflect a commitment by the local rail industry to provide improved service to rail users. Thank you very much.

[The 1982 annual report of the Houston terminal project follows:]

A PROGRAM
OF
EXPERIMENTS
INVOLVING
CHANGES IN TERMINAL OPERATIONS
IN THE HOUSTON GATEWAY

ANNUAL REPORT

1982

Prepared by:

Houston Terminal Project

EXECUTIVE SUMMARY

This report summarizes the 1982 activities of the Houston Terminal Project, a labor, management and government undertaking directed by the Houston Regional Rail Labor/Management Steering Committee.

The objective of the Houston Project is to improve operations in the Houston Gateway that affect the quality and cost of rail transportation service. The focus of the Project has evolved from a single primary approach concentrated on experimental changes in operations that involve labor agreements to a broad spectrum of approaches that also includes improved communications, training programs, traffic flow studies, consolidation studies, transfer of systems technology and coordination between railroads.

Accomplishments

During 1982, some of the more significant accomplishments of the Houston Terminal Project included:

- Continued experimentation with operational changes. Three interchange experiments were conducted on the PTRA: Interchange of ATSF/Union Equity Unit Grain Trains at PTRA's Manchester Yard, Champion Paper Interchange between SP/PTRA, and SP/PTRA Interchange at Pasadena Yard. The net impact of these experiments was a 20% reduction in the volume of traffic handled at PTRA's North Yard. Estimated benefits, based on traffic levels during the 4th quarter of 1982, were placed at $1.9 million in car hire savings and $1.3 million in potential reduction in PTRA operating costs. With normal levels of traffic, estimated annual car hire savings can be expected to increase to $2.7 million while operating savings would approach $1.9 million.

- Continued monitoring of the Transportation Information Center, which was established in 1980 as a Project experiment, in order to address problems associated with the mishandling of interchange traffic because of information deficiencies. Staffed by eleven (11) clerical positions from the HB&T, PTRA and SP, the TIC Center produced estimated annual benefits of $1,136,460 in 1982.

- Development of Employee Involvement Programs on the HB&T and the SP as the result of a Federal Mediation & Conciliation Service (FMCS) grant program. The Project, assisted the Houston railroads

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in applying for the grant and in developing the Transportation Problem Solving training program.

- Active participation of Project staff in the work performed by the Rail Traffic Control (RTC) Operating & Signal Systems Committee in studying the design, organization and operational requirements of the RTC system.

- Appointment of the Project Director as Transportation Coordinator representing Houston Railroads with the City of Houston.

Future Plans

The contract covering the activities of the Houston Terminal Project has been renewed for the 1983 calendar year. The statement of work provides for an extention of work performed under previous contracts. In addition to the continued development and implementation of experiments, the Project will continue to develop and implement specific training programs designed to improve labor and management communication, productivity and safety. Specific emphasis will be placed on designing an Operating Rules Training Program based on computer assisted instruction techniques. Also, in the area of alcohol and drug abuse, the Project will work closely with labor and management to promote the adoption of Rule G By-Pass agreements. The Houston Project will also continue its participation in development of the Rail Traffic Control Center concept.

In addition, a study of intermodal operations in the Houston Gateway will be conducted in order to identify potential areas of operational research and experimentation to improve intermodal profitability. This study will be sponsored by the AAR's Freight Car Utilization Program.

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1. INTRODUCTION

The Houston Terminal Project is a labor, management and government undertaking directed by the Houston Regional Rail Labor/Management Steering Committee. The Houston Gateway has been selected as a location for testing innovative changes in operational aspects of rail terminals.

Inefficiencies in terminal operations affect the quality and cost of rail service. These conditions have also contributed to the decline in the railroad share of the overall transportation market. Some of the major terminal problems are caused by those labor agreements and operating practices that retard the movement of cars. Representatives of labor, management and government, therefore, have joined together in an attempt to address the inefficiencies associated with terminal operations.

The Houston Terminal Project, established in 1977, is part of the continuing expansion of a concept that had its origin in the action taken by the Railroad Industry's Labor/ Management Committee in 1970. An initial study conducted by a Labor/Management Task Force on Terminals, subsequently known as the Task Force on Rail Transportation, identified major terminal problems and recommended an experimental program to effect changes which could assist in the resolution of these problems.

The Houston Terminal Project is jointly sponsored by the Association of American Railroads, Houston Railroads, Labor Organizations and the Federal Railroad Administration. The Houston Team is managed by a fulltime Project Director responsible to the Houston Regional Rail Labor/Management Steering Committee. The Project Team also includes a half-time Labor Co-Director, an Assistant Director, a Transportation and Marketing Analyst, Management & Labor Coordinators, a Data Analyst, Consultants working part-time under contract and an Administrative Assistant. The Project Team has also established

a working relationship with local operating officers and labor representatives of the railroads in the Houston area.

This report summarizes the 1982 activities of the Houston Terminal Project. The basic purpose of this annual report is to document the evolving role of the Project as a research staff charged with the responsibility of developing coordinated approaches to improving rail service. The report is formatted to address specific program areas that indicate the nature of the work performed by labor/management project teams.[1]

The Project staff and a brief description of the Houston Gateway is contained in Appendix A.

2. OPERATIONAL CHANGES

The traditional mechanism utilized by Terminal Projects to introduce changes in rail operations and labor agreements involves the experimental approach. Experiments are developed from suggestions from employees, local management and through the Project's Terminal Performance Measurement System (TPMS). Once an experiment has been developed, all involved parties must concur with the experimental conditions generally spelled out in a Memorandum of Understanding. The Project's Steering Committee is also called upon to endorse the experiment so as to ensure that pre-established policies governing labor/management cooperative activities are adhered to.

The key aspects and components of any experiment can be summarized as follows:

- experiments are temporary with agreed upon beginning and terminating dates;

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[1] In addition to the information provided in this report, more detailed descriptions of the referenced experiments and research programs are contained in completion reports which are available upon request.

- At the conclusion of any experiment, operations revert back to pre-experimental conditions unless otherwise agreed to;
- monitoring committees composed of representatives of involved organizations are established to regularly review the status of on going experiments;
- quantitative measurements of experiments are developed and maintained by the Project using existing railroad data and the Project's TPMS;
- assurance is given to participating employees stipulating that no one will be adversely affected financially as a result of any experiment;
- an incremental operating fund is contained in the Project's budget to reimburse employees in the event an experiment results in financial loss;
- results of experiments are incorporated into completion reports and submitted to involved parties

2.1 Interchange Experiments

During 1982, several experiments were implemented to provide operating flexibility by minimizing the number of yards in which interchange traffic required handling. Direct by-products of these experiments included reduced operating and car hire costs as well as improved equipment utilization and service to rail users. The following narrative, highlights the key aspects of interchange experiments conducted in 1982.

2.1.1 Interchange of ATSF Union Equity Unit Grain Trains at PTRA's Manchester Yard

- Initial Test Period: February 1, 1982 to July 1, 1982.
- The objective of this experiment was to reduce congestion at PTRA's North Yard and to expedite the movement of unit grain trains arriving Houston via the ATSF and destined for Union Equity Elevator.
- During the experiment:
  - ATSF/Union Equity Unit Grain Trains utilized SP trackage from Rosenberg, Texas to PTRA's Manchester Yard bypassing the HB&T's South and Basin Yards and the PTRA's North Yard.
  - PTRA/UTU representatives agreed to the designation of Manchester Yard as an additional location for interchange of ATSF/Union Equity Unit Grain Train.

- Average car cycle from Belleville to Union Equity and return (excluding industry time) was reduced 37.2 hours per car. The power cycle from Belleville and return dropped 49.1 hours.

- Based on a monthly volume of 2900 cars moving in 65 car trains, the benefits from improvements in car and power cycles were estimated to be $880,000 per year.

. Action Taken: Experiment extended to November, 1982. Permanent agreement signed between UTU and PTRA on September 8, 1982. ATSF and SP are pursuing a trackage rights agreement.

2.1.2 SP/HB&T Trumix Aggregate Trains

. Initial Test Period: January 15, 1982 to July 15, 1982.

- The experiment involved the temporary waiver of a UTU/HB&T agreement to allow the relocation of the HB&T/SP interchange point for Trumix unit aggregate trains from SP's East Yard to HB&T's Percival Siding.

- Separate negotiations between the SP and UTU switchmen, enginemen and brakemen were concluded on March 11, 1982 to accommodate the interchange at HB&T's Percival Siding.

- The purpose of the experiment was to determine if the change in operations would accommodate the bi-weekly running of aggregate unit trains from Eagle Lake, Tx. to Trumix.

- Under normal operating conditions, this traffic would require the following terminal handling:

  . transfer from SP's Englewood Yard to East Yard;
  . transfer from SP's East Yard to HB&T's South Yard;
  . transfer from South Yard to Congress Yard;
  . industry move from Congress to Trumix;
  . empties would be reverse routed.

  With direct interchange at HB&T's Percival Siding, all of these terminal moves are avoided.

- During the January 15 - April 20, 1982 time period, 22 Trumix trains were received in interchange at Percival. Turnaround time, including industry time at Trumix and Eagle Lake, averaged 98 hours or 4 days per train. During the extention period traffic volumes averaged 200 cars per month with 5 turns per month on the equipment.

. Action Taken: Experiment has been extended to January 14, 1983.

2.1.3 Champion Paper Interchange between SP-PTRA

. Initial Test Period: July 15, 1982 to October 15, 1982.

- The experiment involved the temporary waiver of a UTU/PTRA agreement to allow the relocation of the PTRA/SP interchange point for Champion Paper woodchip and pulpwood loads and empties from PTRA's North Yard to PTRA/SP trackage located between Tower 86 and Hedrick Street.

- The purpose of the experiment was to enable the SP to bypass Englewood Yard and move directly to and from the PTRA avoiding the requirement to switch this traffic on the SP at Houston.

- Under normal operating conditions, this traffic would require the following terminal handling:

  . Classification at SP's Englewood Yard.
  . Transfer from SP's Englewood Yard to East Yard.
  . Transfer from SP's East Yard to PTRA's North Yard.
  . Classification at PTRA's North Yard.
  . Transfer from PTRA's North Yard to Manchester Yard.
  . Empties are reverse routed.

- With direct interchange at trackage located between Hedrick Street and Tower 86, two switch moves and four transfers on the SP and one classification and two transfers on the PTRA were avoided for each load moved to Champion.

- During the experiment, an average of 1240 cars per month are avoiding processing at North Yard. (Based on in & out count).

- During the experiment, average terminal elapsed time, exclusive of industry time, was reduced by 44 hours per car.

- Based on experimental traffic levels and car ownership costs for open hoppers of $.81 per hour, reduced terminal detention time produced annual car time savings of approximately $275,000.

. Action Taken: Experiment has been extended to February 8, 1983.

2.1.4 SP/PTRA Interchange at Pasadena Yard

. Time Period: July 5, 1982 to October 5, 1982

- The experiment involved the temporary waiver of a UTU/PTRA agreement allowing for the relocation of the SP/PTRA interchange point for traffic moving in and out of Pasadena from PTRA's North Yard to PTRA's Pasadena Yard.

- The SP presently runs a train between Strang Yard and St. Louis, Mo., which prior to the experiment picked up PTRA traffic at

Englewood Yard. The requirement to pick this traffic up at Englewood affects the level of terminal delay for both PTRA traffic and traffic out of the Strang area. It also adds to congestion at Englewood and other delays in the terminal.

- With interchange at Pasadena Yard the SP can place PTRA traffic originating in Pasadena area on the train at Strang Yard thus avoiding pick up, delay and congestion at Englewood.

- With direct interchange at Pasadena Yard, the SP incurs one additional switch and transfer movement on approximately 70% of the traffic while the PTRA avoids two transfer movements.

- During the experiment, average terminal elapsed time, exclusive of industry time, has been reduced by 34 hours per car.

- Based on experimental traffic levels and car ownership costs for tank cars of $.89 per hour, reduced terminal detention time produces annual car time savings of approximately $330,000.

- During the experiment, daily car volumes averaged 31 cars on the inbound and 29 cars outbound from industries served out of Pasadena Yard.

- As a result, an average of 1825 cars per month are avoiding processing at North Yard. (Based on in/out count).

2.2 Experiments Involving Information Systems

During 1982, the Houston Project continued its efforts in working with Houston railroads on improving clerical productivity as it relates to car distribution and the interchange of car movement information. Included in these activities were the HB&T/MP Empty Car Distribution Experiment and the Transportation Information Center (TIC) Monitoring Committee.

2.2.1 HB&T/MP Empty Car Distribution Experiment

. Time Period: March 10, 1982 to June 10, 1982.

- Purpose of experiment was to reduce the crosshauling of empty equipment involved in filling MP car orders from HB&T customers.

- As part of the experiment, the HB&T Car Distributor utilized a programmed procedure to apply equipment, made empty on the HB&T, to MP Car Orders based on the following priority:

  . Empties within an industry zone were applied to orders for that zone.

. Empties in a classification yard are applied to orders for industry zones served by that yard.
. If no equipment was available in the proper industry zone or classification yard to fill an order, then other industry zones and classification yards were monitored for potential equipment.
. Request MP to fill order from empties located on their property.

- Prior to the procedural change, all MP empty equipment orders from HB&T customers were entered into the MP's TCS System and cars were furnished by MP's Car Control Center in St. Louis from empties located on MP property.

- The results of the experiment are represented by change in the percentage of MP Car Orders filled by empties released in HB&T as opposed to crosshauls:

Procedural Change	% of Car Orders filled by empties released on HB&T	% of Car Orders filled by crosshauls
Prior To	42%	58%
Following	73%	27%

. Action Taken: Programmed procedural change and Car Distributor function have been made permanent.

2.2.2 Transportation Information Center (TIC)

Since 1980, when the TIC Center was implemented as an experiment, the Houston Project has maintained an on-going relationship with the labor and management personnel responsible for its continued performance. The TIC Center now operates three (3) shifts per day, seven (7) days a week with eleven (11) clerical positions filled at carrier expense (estimated at $300,000 annually), by the HB&T, PTRA and SP. This joint, multicarrier program functions as an interchange bureau addressing problems associated with the mishandling of rail traffic because of information deficiencies. Computer terminals provide access to the SP's TOPS System, the HB&T and PTRA's TIES System as well as the Missouri Pacific's (MP) TCS System. By utilizing these

systems, TIC clerical personnel can review and update car movement information prior to interchange at Houston. During 1982, a TIC Monitoring Committee was established at the request of the Houston Project to provide a forum for evaluation and continued enhancement to TIC clerical procedures. This committee is comprised of labor representatives, transportation supervisory personnel and Project staff and meets on a monthly basis.

The estimated annual savings in 1982 of the TIC Center are listed below:

RAILROAD	ANNUAL SAVINGS
PTRA	$188,450
SP	657,175
HB&T	290,835
Total	$1,136,460

These savings are based on carrier estimates of the cost attributable to the following TIC procedures:

- wrong placement avoided (inter railroad)
- hold tracks avoided
- wrong placement avoided (intra railroad)
- worked off hold track
- avoided set back in interchange
- pre-routed traffic
- car diverted to avoid Houston Gateway

3. ANALYSIS OF PTRA INTERCHANGE EXPERIMENTS

3.1 Operational Impact

The primary focus of experiments conducted in 1982 involved testing the impact of relocating interchange points for traffic originating and terminating on the PTRA. The existing location for all traffic interchanged with the PTRA is North Yard. With the introduction of the ATSF/Union Equity, Champion Paper and Pasadena interchange experiments, a significant percentage of traffic now avoids classification at North Yard. Exhibit 1 shows the total number of cars handled by PTRA interchange location for 1982. For the year, 91.2 percent of interchange traffic was handled at North Yard. Analyzing

fourth quarter statistics, however, reveals that on a monthly basis, 5,366 cars or 20% of PTRA interchange traffic by-passed processing at North Yard. During the fourth quarter of 1982 all three experiments were running concurrently and the new operating procedures were fully instituted.

A number of approaches can be utilized in examining the overall impact on terminal performance resulting from a substantial reduction in car handling at PTRA's North Yard. Exhibits 2 through 6 list relevant statistics for the PTRA during the 1972-1982 time period. As shown in Exhibit 2, grain traffic represents a significant percentage of total cars handled on the PTRA. Excluding the peak periods of 1973 and 1978-79, grain represents, on a monthly basis, approximately 32.8 percent of car movements on the PTRA. The graphs presented in Exhibit 3 (Grain Cars Unloaded on PTRA) and Exhibit 4 (Total Cars Handled on PTRA), show the direct correlation between the fluctuations in grain traffic and the volume of traffic on the PTRA.

The peak periods of grain represent the severest strain on PTRA facilities. These peak periods are normally associated with equipment shortages, increased operating costs and reduced service reliability for grain shippers. In the past decade, shippers have been induced to purchase their own private equipment, develop the inland sub-terminal elevator concept and increase unit and multi-car movements of grain for export at Houston. The PTRA, however, because of its unique relationship with the Port of Houston Authority has been constrained from expanding the physical capacity of its plant in order to meet these peak demands of grain traffic. As a non-profit association of all railroads operating in the Houston Gateway, the PTRA relies on the Port Authority for its capital requirements. The last capital improvement on the PTRA, funded by resources made available by the Port of Houston Authority, occurred in 1971 at North Yard.

Consequently, the PTRA's operating flexibility is limited when it experiences surges in traffic volumes. As terminal congestion increases, the probability of trains being set out prior to arrival at Houston also increases. The ultimate result is increased turnaround time on rail equipment and decreased equipment utilization.

Faced with limited financial resources, the response employed by PTRA management to the necessity of increasing operating capacity has been to utilize the experimental approach to introducing changes in operations. With the support of labor, interchange locations, governed by negotiated agreements, have been modified. Although the location for interchange and classifying traffic has been redirected, the switching requirements at these new locations has tended to minimize, in a recessionary period, the impact on switch engine assignments. In addition, without a direct cash outlay, the PTRA can now tolerate greater volumes of traffic before reaching its system capacity.

Examining Exhibit 5, (Cars Handled on PTRA, Daily Averages 1972-1982), helps place this into a proper perspective. The cumulative daily average number of cars handled on the PTRA during the 1972-1982 time period was 1,344. With 20% of PTRA traffic avoiding the classification process at North Yard, the PTRA can sustain an increase in traffic to 1,612 cars per day with its existing physical plant without affecting its operating efficiency. This volume of traffic would be superceeded by only one previous year, 1973, the year of the Russian grain sale.

PTRA operating officers attest to the improved performance of their terminal operations. In the past, a 2,000 car day would require three to four days to recover from the increased traffic load. Today, traffic levels in excess of 2,000 cars per day can be managed without major disruptions of the established operating plan.

3.2 Economic Impact

In determining the economic impact of the changes in operating procedures on the PTRA particularly emphasis was placed on the value of increasing the effective capacity of North Yard. The operating capacity of a classification yard is dependent upon a number of variables. Included among these are the amount of track space available for switching, throughput time or average elapsed time each car spends in a yard, as well as power and train crew utilization. Ideally, estimating the benefits of by-passing North Yard with 20% of total cars handled would involve quantifying the value of:

. reducing cost/car handled
. eliminating switch moves
. reducing per car average terminal detention time
. reducing switch engine hours
. reducing the number of transfer moves
. increasing cars per switch engine hour.

Comparing the variation in these statistics during a base period, prior to the introduction of the experiments, with those of the experimental period, however, has the tendency of producing unreliable results. Cost per car handled is an aggregate statistic determined by simply dividing total cost of operation by total traffic handled. With increased expenditures on maintenance of way during the experimental period it is impossible to isolate any observable reduction in cost per car based on reduced car handling on the PTRA.

Reduction in switch engine hours is also dependent upon a number of considerations. Typically, the operating plan calls for cutbacks in switch engines and switch engine assignments when traffic volumes decline. This relationship can be classified as non-linear. At higher volumes of traffic, minor fluctuation in cars handled (ie. 1500 to 1400 cars/day) results in little if any reduction in switch engine hours. As traffic levels decline

because of an overall and sustained decrease in business (ie. from 1200 to 1100 cars per day), more pronounced reductions in switch engine hours will be observed as switch engine assignments are either consolidated or suspended.

From an analytical standpoint, these inter-relationships make it extremely difficult to correlate any reduction in operating expenses with incremental changes in operations. The cumulative impact of the interchange experiments should, however, have a favorable impact on the PTRA as a whole. The diversion of such a large volume of traffic away from North Yard affects many other aspects of terminal operations. A simulation model is needed to properly access the impact of diverting cars away from North Yard. This simulation would measure performance and costs for various degrees of diversion and levels of traffic.

Absent a simulation model to measure the economic impact of reducing the congestion in North Yard, it was necessary to confine the evaluation to the benefits associated with the experimental changes that were made. Two categories of cost savings were estimated; improved equipment utilization to car owners and reduced operating expenditures for the PTRA. (See Exhibit 6). Annual car hire savings, based on traffic levels during the 4th quarter of 1982, a 36 hour per car reduction in average terminal detention time and car ownership costs of $.80 per hour, were estimated to be approximately $1.9 million. These savings are system savings since the PTRA does not own any equipment. Further, these savings are distributed to owners of both private and railroad equipment. The significance of improved equipment utilization will also have a greater importance to the industry in periods of excess demand for equipment as opposed to periods of car surpluses.

The reduction in switching and yard transfer costs was conservatively estimated by PTRA Operating Officers to be at least $20 for each car that

bypassed North Yard. Based on 4th quarter traffic levels, savings accruing to the PTRA were estimated to be approximately $1.3 million annually. With normal levels of traffic (1300 cars per day), the reduction in car hire costs would be at an annual rate of $2.7 million and the reduction of annual operating costs would be at a rate of $1.9 million.

An alternative approach to viewing the economic impact of the interchange experiments involves projecting the required capital outlay to expand the car handling capacity of the PTRA's physical plant. Assuming that land is available and that the increase in capacity could be provided by adding 438 track lengths to North Yard, a capital expenditure of approximately $3 million would have been required. (See Exhibit 7).

4. EMPLOYEE INVOLVEMENT PROGRAMS

During 1982, the Project was also involved in assisting the Southern Pacific and HB&T railroads in establishing employee involvement programs. In 1981, at the behest of the Regional Steering Committee Meeting, the Project responded to a request of proposal for a Federal Mediation & Conciliation Service (FMCS) grant program authorized by the Labor/Management Cooperation Act of 1978. Following the awarding of a grant to develop a labor/management training program, subcontractors were selected to design transportation problem solving (TPS) training material and to conduct training workshops. Workshop participants included front line supervisors and rank and file employees. During the twelve (12) month grant period, nine (9) workshops were held which resulted in the establishment of three (3) TPS subcommittees on the HB&T and six (6) subcommittees on the SP. In addition, each property has established Oversight or Steering Committees, consisting of elected union officials and management officials to assist in scheduling, compensation

and other policy issues as well as contributing to the problem-solving process when requested.

As part of the TPS process, employees from different departments and levels of supervision, pinpoint problems occuring in their work areas and utilize a structured, quality circle based, format for developing, implementing, monitoring and reporting the results of their projects. Although the training materials were developed and customized for testing on the railroads participating in the grant, only minor modification is necessary for usage by any railroad interested in initiating the TPS process. In fact, a national conference was held in Houston on December 8, 1982, to provide an opportunity for rail industry labor and management representatives to review the results of Houston/FMCS grant program. (See Appendix B for copy of Conference Agenda.) Training and instructor manuals were made available to conference attendees.

Subsequent to the grant, the HB&T and SP have expanded their employee involvement programs. The SP has established an Eastern Lines Oversight Committee and has TPS subcommittees in place in Beaumont, Lufkin, Houston, San Antonio and Victoria, Texas. The HB&T has added one subcommittee and formed a joint Rail Traffic Control TPS committee with the SP in order to establish a mechanism for addressing potential problems associated with the consolidation of control functions of interlockers within the Houston Gateway.

5. RAIL TRAFFIC CONTROL (RTC)

Historically, a continued source of train delays in rail terminals has been the partiality shown at major interlocking plants. Train movements through interlockers, locations where two or more railroads intersect, are generally dictated by ownership of interlocking plants as opposed to operating necessity. Tower operators can be expected to provide preferential treatment to train movements of the carrier from which they are employed. The increased

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demand for rail services in the expanding Houston economy, however, has increased the cost of maintaining a system whereby railroads operate as separate entities as opposed to an interdependent mode of transportation. With space for expansion limited by commercial and residential development, Houston railroads have therefore made a joint decision to pursue a Rail Traffic Control approach to improving the coordination of train operations.

During 1982, an Operating and Signal Systems committee was established to study the design, organization and operational requirements of the RTC system. The Houston Project has played an integral role in the activities of these committees since their inception. The RTC concept is modeled after the airline industry's Air Traffic Control System and involves centralizing the control over all intracity train and transfer movements in order to minimize terminal delays.

Excessive train delays have also contributed to mounting public pressure to reduce the extent of blocked street crossings and its impact on motor vehicle traffic. The City of Houston alone has in excess of 800 grade crossings which, in terms of numbers, ranks it ahead of 8 states. Reducing train delays attributable to conflicts at interlocking plants is also being viewed as an effective program for reducing the incidence of blocked rail-highway grade crossings.

The interest in establishing the RTC System is an outgrowth of the concerted efforts on the part of the Houston Belt & Terminal Railway Company (HB&T) and the Southern Pacific Transportation Company (SP) to coordinate traffic movements along high density track segments. The initial phase of RTC involved the relocation of the control of SP's Tower 87 to the HB&T's Transportation Operations Center (TOC) at Union Station. TOC has been subsequently renamed RTC and is staffed by a SP and HB&T Train Operator as well

as RTC Coordinators for the HB&T. RTC presently controls train and transfer movements originating and terminating at the SP's Englewood Yard as well as all movements occurring on the HB&T. With train operators from the HB&T and the SP sitting side-by-side in front of their respective control boards, a significant proportion of conflicts and delays have already been reduced at the Tower 87 Interlocking Plant.

Functionally, RTC will be responsible for controlling approximately 150 daily trains, transfers and industry movements through the Houston Gateway. The information in the computer support system will be available for display on colored CRT terminals by terminal zones or sectors that will segment the Gateway. The sector display will show the track layout, identify all signals and switches and indicate the current status of the sector including the identification and location of trains and transfers in the sector. Instructions for the control of train and transfer movements would be accepted by the computer support system and implemented by setting the appropriate signals and aligning the routes. The computer support system would also contain a line-up of the planned train and transfer movements and would be used to monitor the status of the Gateway and identify potential routing conflicts.

It is envisioned that an RTC Operating Committee, composed of officers responsible for their respective Houston operations, will be formed and be responsible for setting the policies under which RTC will operate and for setting priorities and guidelines for resolving routing conflicts. Periodic reviews of RTC performance will also be a function of this Committee.

From an organizational standpoint, plans for train and transfer movements would be developed by RTC Coordinators representing each railroad on a 24-hour basis. These plans would specify the arrival and departure times, desired routings and operating characteristics of each movement. Coordinators

would monitor the status of the gateway and revise their plans in accordance with changing conditions. RTC Coordinators would offer their individual plans and revisions to a neutral RTC Director for review with respect to the needs of all roads. The RTC Director, ideally an experienced operating officer knowledgeable in train dispatching, terminal operations and train pickups and setouts, would be appointed by the RTC Operating Committee and have full responsibility for RTC operations.

Upon receiving the plans from individual railroads the RTC Director would integrate them into an overall gateway plan. Identification of potential routing conflicts would then be resolved with the cooperation of the railroad coordinators, modifying the plan to minimize interference between movements. If potential routing conflicts cannot be resolved with the roads involved, the RTC Director would impose changes based on established policies and priorities for RTC.

In its more advanced stages, RTC will facilitate the movement of rail traffic through the gateway over the most direct, least congested routes, regardless of track ownership. Trackage agreements and the construction of new connections will be required to maximize the opportunities made available through RTC. Technical proposals will be solicited from equipment manufacturers in 1983 to obtain detailed assessments of hardware and software requirements of the RTC system. With implementation, the investment in a system to consolidate the control of major interlockers in Houston will yield considerable savings through increased equipment and locomotive utilization, fuel conservation, a reduction in train delays of an estimated 10-15% and improved productivity of train and engine crews.

6. RAILROAD CITY COORDINATOR

In April of 1982, the PTRA Board of Operations voted to appoint the Project Director of the Houston Terminal Project as Transportation Coordinator with the City of Houston. In this capacity, the Director, assisted by Project staff, is responsible for representing local rail interests in the area of:

- Citizen complaints relative to grade crossings and conditions of right-of-ways.
- Coordinating grade crossing improvements with the City's Traffic & Transportation Department.
- Line abandonments and street crossing closures.
- Rail Ordinances before City Council.
- Various City Agencies including:
  - . Department of Public Works
  - . Citizen's Assistance - Office of Mayor
  - . Mayor's Staff
  - . Police Department
  - . Fire Department

To improve the overall level of communication between Houston railroads and City officials, numerous hi-rail inspections of rail facilities were conducted in 1982. In addition, the Project serves as the primary liaison between railroad maintenance departments and the City's Public Works and Traffic and Transportation Departments.

During 1982, a coordinated effort involving Houston railroads and the city's fire and police departments was also introduced. The railroads identified the RTC Center as the central dispatching agency for information pertaining to train movements, particularly those involving hazardous materials. Railroad representatives held numerous special meetings with city police and fire officials to establish proper procedures for a fast and appropriate response in the event of an accident. Specifically, by utilizing RTC, lists of rail cars showing the location of each car in a train and any special

handling instructions can be made available upon request from a computer emergency response system.

7. FUTURE PLANS

The contract covering the activities of the Houston Terminal Project has been renewed for the 1983 calendar year. The statement of work provides for an extention of work performed under previous contracts. In addition to the continued development and implementation of experiments, the Project will examine opportunities for increasing the local rail industry's responsibility for continuation of Houston based labor/management cooperative activities.

In 1983, the Project will continue to develop and implement specific training programs designed to improve labor and management communication, productivity and safety. For example, an Operating Rules Training Program based on computer assisted instruction techniques will be designed. Also, in the area of alcohol and drug abuse, the Project will work closely with labor and management to promote the adoption of Rule G By-Pass agreements.

Further, a study of intermodal operations in the Houston Gateway will be conducted in order to identify potential areas of operational research and experimentation to improve intermodal profitability. This study will be sponsored by the AAR's Freight Car Utilization Program.

Finally, the Houston Project will continue its participation in development of the Rail Traffic Control Center. In this regard, the Project will prepare a request for proposal for submission to qualified vendors in the field of signal systems and communication. This document will serve as the basis for soliciting detailed technical and cost proposals for implementing the RTC program in Houston.

8. PARTICIPATING ORGANIZATIONS

In the course of summarizing the 1982 activities of the Houston Terminal Project, reference has been made to organizations participating in and responsible for the accomplishment of the Houston Project. For informational purposes, a detailed listing of participating organizations is presented below:

Railroads

- Atchison Topeka and Santa Fe
- Fort Worth & Denver
- Missouri-Kansas-Texas
- Missouri Pacific
- Southern Pacific Transportation Co.
- Port Terminal Railroad Association
- Houston Belt & Terminal Railway Co.

Labor Organizations

- Brotherhood of Railway, Airline and Steamship Clerks
- United Transportation Union

Others

- Association of American Railroads
- Federal Railroad Administration

These organizations are the principal sponsors and funders of the Houston Terminal Project. During 1982, the Federal Railroad Administration and the Association of American Railroads accounted for approximately 60% of the financial resources available for conducting labor/management research activivities in Houston. The remaining portion of the Project's budget was distributed to PTRA tenant lines based on their established cars handled, cost allocation formula. Future requests for FRA funding participation is expected to be gradually reduced as the benefits of the research programs instituted by the Project are realized and more of the Project's costs are absorbed locally. Although no target date has been set, long term operation of the Houston Terminal Project will be dependent upon total financing from industry sources.

In order to ensure that Project activities are conducted in accordance with pre-established policies, the participating organizations have also been asked to assign representatives to sit on the Houston Regional Rail Labor Management Steering Committee (see Exhibit 8 for Committee membership). This Steering Committee functions as a forum for reviewing the status of Project activities and to recommending additional areas of experimentation.

The Project has also been invited by the participating organizations to deliver presentations on existing and future activities. During 1982, Project staff members have either addressed directly or prepared detailed briefings for the following groups:

- Houston Belt & Terminal Executive Committee
- Port Terminal Railroad Association Board of Operations
- Port Terminal Railroad Association Operating Committee
- Port Terminal Railroad Association Contract Committee
- Houston Belt & Terminal Staff Meetings
- Port Terminal Railroad Association Staff Meetings.

These presentations have provided valuable opportunities to further define the role and relationship of the Houston Terminal Project to the local rail industry.

EXHIBITS

TOTAL CARS HANDLED
by
PTRA INTERCHANGE LOCATION

1982

	NORTH YARD	MANCHESTER	PASADENA	TOTAL	% NORTH YARD
January	42,066			42,066	100.0
February	40,625	1,446		42,071	96.6
March	41,361	2,471		43,832	94.4
April	35,990	1,958		37,948	94.8
May	29,321	694		30,015	97.7
June	29,568	591		30,159	98.0
July	31,248	2,069	1,480	34,797	89.8
August	31,063	3,365	1,874	36,302	85.6
September	23,032	1,743	1,950	26,725	86.2
October	21,227	1,874	2,363	25,464	83.4
November	20,123	2,968	2,560	25,651	78.4
December	22,042	3,629	2,615	28,286	77.9
TOTAL	367,666	22,808	12,842	403,316	91.2

Source: TIES/PTRA Daily Inbound/Outbound Report

-EXHIBIT 1-

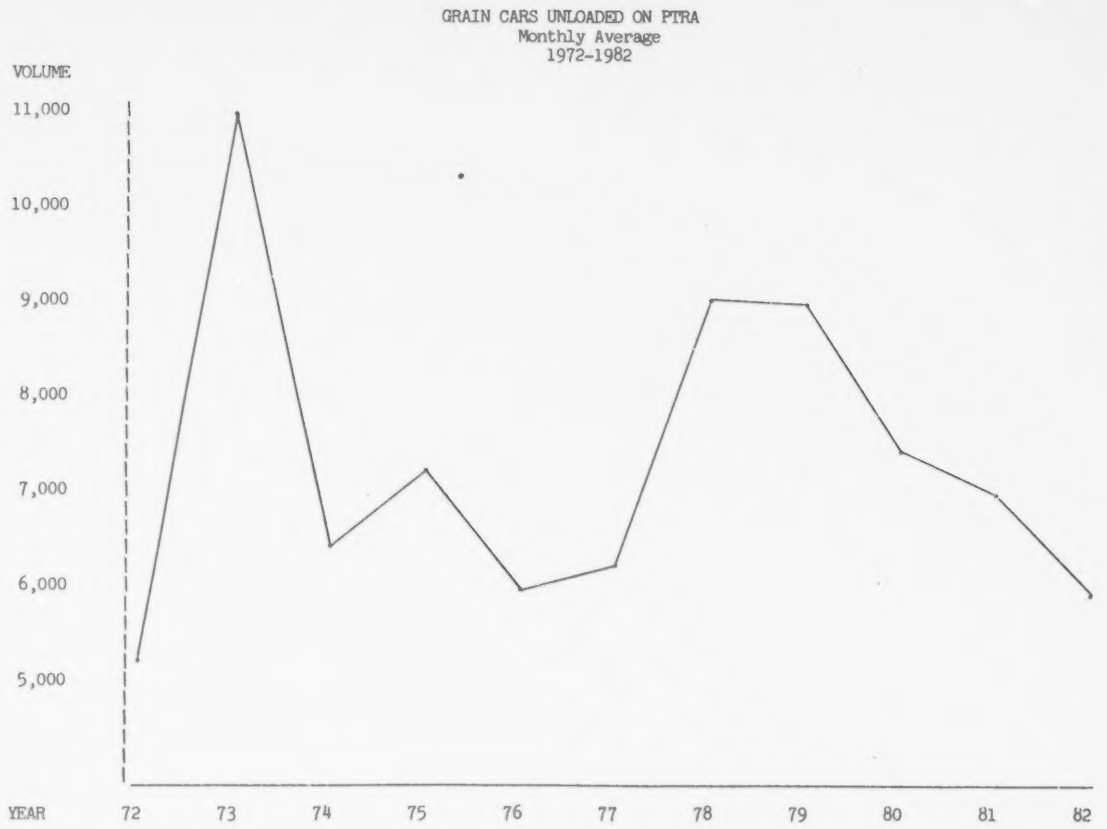
GRAIN CARS AS A PERCENTAGE
OF TOTAL CARS HANDLED ON PTRA
(Monthly Averages)

1972-1982

YEAR	GRAIN CARS	TOTAL CARS	PERCENTAGE
1972	10,738	38,748	27.7
1973	22,004	51,047	43.1
1974	13,176	42,512	31.0
1975	14,720	41,109	35.8
1976	11,940	36,770	32.5
1977	12,640	38,007	33.3
1978	18,112	42,516	42.6
1979	17,978	44,032	40.8
1980	15,084	42,279	35.7
1981	13,958	38,912	35.9
1982	11,746	38,492	30.5

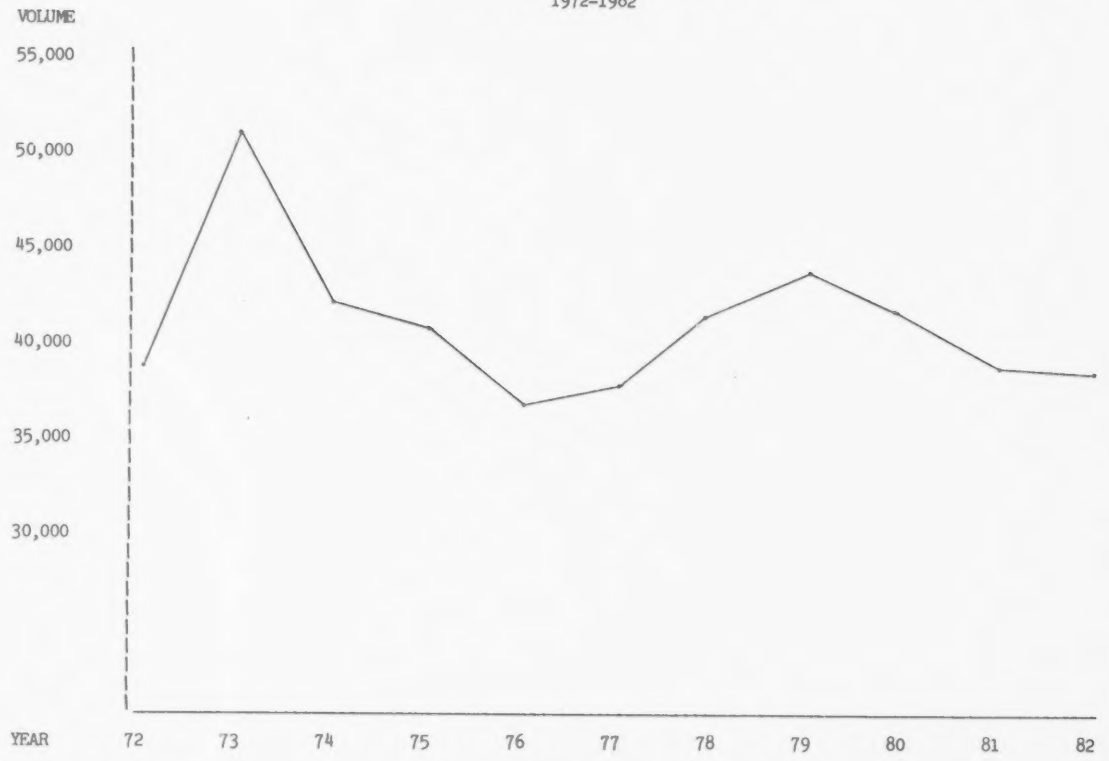
Volumes represent in and out car counts

-EXHIBIT 2-


GRAIN CARS UNLOADED ON PTRA
Monthly Average
1972-1982
VOLUME
11,000
10,000
9,000
8,000
7,000
6,000
5,000
YEAR
72
73
74
75
76
77
78
79
80
81
82

-EXHIBIT 3-

TOTAL CARS HANDLED ON PTRA
Monthly Average
1972-1982



-EXHIBIT 4-

CARS HANDLED ON PTRA
Daily Average
1972-1982

1972	1,273
1973	1,678
1974	1,397
1975	1,351
1976	1,208
1977	1,249
1978	1,397
1979	1,447
1980	1,390
1981	1,279
1982	1,119
Cumulative Average	1,344

-EXHIBIT 5-

ESTIMATED ANNUAL SAVINGS

OF BYPASSING NORTH YARD

WITH 20% OF INTERCHANGE TRAFFIC

	TRAFFIC LEVELS	
CAR HIRE SAVINGS	Experimental Period*	Normal**
Number of Cars/Month	5,366	7,900
Average Per Car Reduction in Terminal Detention Time	36 hours	36 hours
Cost/Car Hour	$.80	$.80
Monthly Car Hire Savings	$154,500	$227,520
Annual Car Hire Savings	$1,854,000	$2,730,240
OPERATING SAVINGS		
Estimated/Car Savings	$20	$20
Estimated Monthly Reduction in Operating Costs	$107,320	$158,000
Estimated Annual Reduction in Operating Costs	$1,287,840	$1,896,000

* Based on 4th Quarter 1982

**Based on daily average of 1300 cars

-EXHIBIT 6-

ALTERNATIVE ASSESSMENT OF IMPACT

OF REDUCING CAR HANDLING

AT PTRA's NORTH YARD

TOTAL CARS HANDLED*		79,401
North Yard	63,392	
Manchester	8,471	
Pasadena	7,338	
Percentage of Cars Avoiding North Yard		20%
North Yard Standing Car Capacity		2,190
Equivalent Increase in Car Capacity		438
Estimated Construction Cost/Car Length (60 ft./car x 110/ft.)		$ 6,600
Estimated Construction Cost to Increase North Yard capacity by 20%		$2,890,800

*Based on 4th Quarter, 1982

-EXHIBIT 7-

HOUSTON REGIONAL RAIL LABOR MANAGEMENT

STEERING COMMITTEE

R. D. Bredenberg, Assistant General Manager
Southern Pacific Transportation Co.

D. W. Collins, Asst. Gen. Secy. & Treasurer and Director of Education
United Transportation Union
(Co-Chairman)

J. O. Frankie, Division Chairman
Brotherhood of Railway and Airline Clerks

R. A. Green, Vice-Chairman UTU (C&T)
Missouri Pacific Railroad - Gulf District

H. E. Handley, General Manager
Port Terminal Railroad Association

Scott B. Harvey, Director Labor Management Studies
Association of American Railroads

W. E. Loftus, Associate Administrator
Federal Railroad Administration

H. W. Ritter, President & General Manager
Houston Belt & Terminal Railway Co.
(Co-Chairman)

L. S. Young, General Chairman UTU(E)
Southern Pacific - T & L Lines

-EXHIBIT 8-

APPENDIX A

STAFF

OF THE

HOUSTON TERMINAL PROJECT

AND A

DEXCRIPTION OF HOUSTON GATEWAY

29-594 0 - 84 - 6

HOUSTON TERMINAL PROJECT

STAFF

D. K. Joiner, Project Director

C. L. Little, Project Co-Director

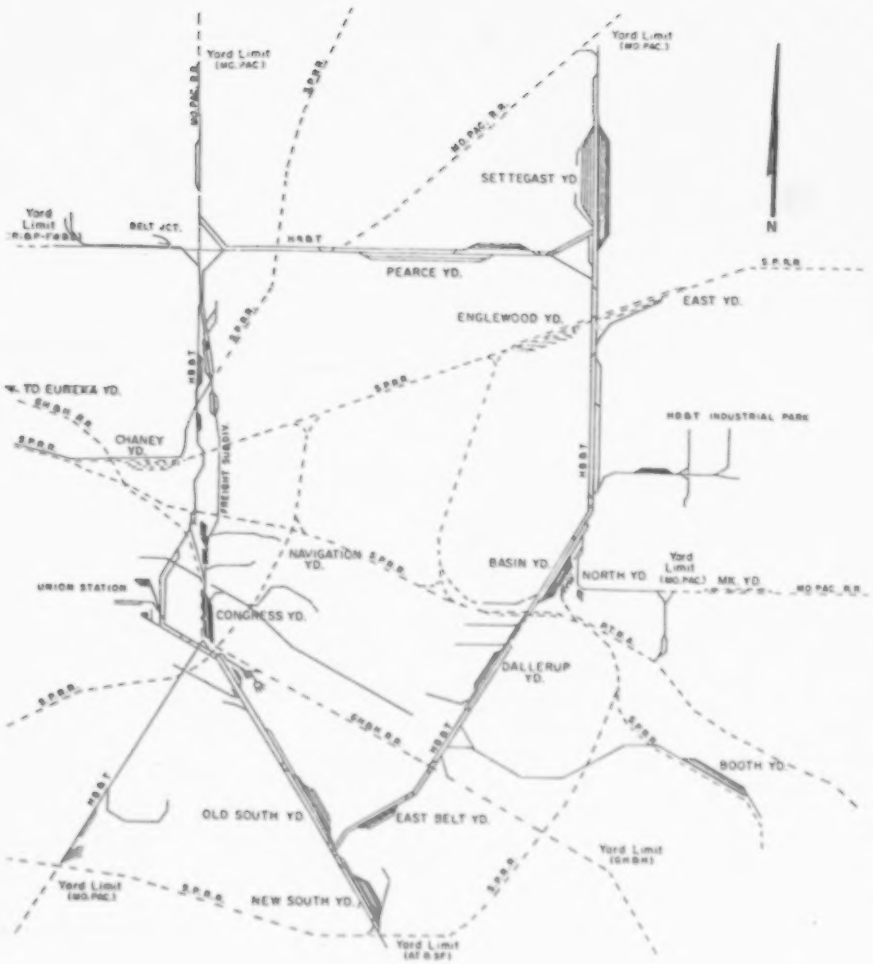
P. R. Collins, Assistant Director

R. F. Romer, Management Coordinator

D. E. Bone, Transportation & Marketing Analyst

J. O. Frankie, Labor Coordinator

L. M. Kurmann, Administrative Assistant



HOUSTON RAIL TERMINAL

A-2

Houston Rail Terminal Complex

The rail network serving the City of Houston and the Port of Houston consists of five major Class I railroads and two switching line railroads. The roads entering Houston are: Atchison, Topeka and Santa Fe (AT&SF); Fort Worth and Denver (FWD); Missouri-Kansas-Texas (MKT); Missouri Pacific (MoPac); and Southern Pacific (SP). The two local terminal railroads are the Houston Belt & Terminal (HB&T), which is owned jointly by MoPac (50 per cent), the Santa Fe (25 per cent), the Rock Island (12.5 per cent), and the FWD (12.5 per cent); and the Port Terminal Railroad Association, a non-profit association of the five road lines and the HB&T.

. Houston Belt and Terminal Railway Co. (HB&T)

The HB&T was organized on June 22, 1908. At that time, the Trinity and Brazos Valley, the Beaumont, Sour Lake and Western Railway Company, the St. Louis, Brownsville and Mexico Railway Company, and the Colorado and Santa Fe agreed to pay the expenses of the Houston Belt and Terminal on a mileage and tonnage basis.

Total employment in June of 1908 was 140. By 1981 employment had risen to 892 and the HB&T payroll was in excess of 2.2 million per month. During 1981 the HB&T handled 2,007, 500 cars. The normal monthly average is approximately 167,700 cars or 38,600 cars per week. The HB&T's sole function is to service the Houston traffic for its owner lines. The HB&T services 555 industries on the 247 miles of track it owns and operates within the Houston switching limits. Additionally, the HB&T has 5 multi-level loading and unloading facilities which normally handle or unload over 100 multi-level cars of automobiles daily.

There are 11 yards in the HB&T system: 3 classification (Settegast, New South and Basin), 6 industrial (Congress, Dallerup, Booth, Old South, Glass and North), 2 storage (Pearce and East Belt). The total system capacity is approximately 8,433 cars. Settegast, the MoPac classification yard is the largest, consisting of 48 tracks with a total car capacity of 4,139.

New South is the main classification yard for the Santa Fe and has a car capacity of 1,386. New South is also the classification yard for FWD traffic for HB&T served industries. New South functions as the arrival and departure yard for Santa Fe and FWD road trains and Santa Fe dispatching.

Basin is an intermediate yard for FWD and Santa Fe trains and has a car capacity of 733. Traffic for the PTRA or the SP is set out here for delivery, while traffic requiring HB&T delivery is sent to New South Yard. FWD handles road train scheduling.

Operationally, trains arriving HB&T classification yards are switched to a classified track for movement in either an outbound train, to interchange or to an industry. Transfer jobs run from all major yards once per shift. HB&T operates three shifts per day: 7 a.m. to 3 p.m., 3 p.m. to 11 p.m. and 11 p.m. to 7 a.m. Trains that are pre-blocked for their destination can usually avoid switching delays if the receiving industry or road can accept them.

. Port Terminal Railroad Association (PTRA)

PTRA is a non-profit association of the five road lines serving Houston and the HB&T. The PTRA was created in 1924 by the railroads entering Houston, the Navigation District (now Port of Houston Authority) and the City of Houston Ship Channel. The slogan used to describe Houston in the 1920's was "WHERE EIGHTEEN RAILROADS MEET THE SEA" and the PTRA was established to meet the paramount need for adequate interchange facilities. The PTRA operates over 173 miles of track owned by the Port of Houston Authority, for which it pays a rental fee of 5 to 7 percent of the tracks' book value and all maintenance costs. The PTRA also operates over an additional 158 miles of industry-owned tracks and serves about 154 industries. The PTRA does not service all ship channel industries; a portion of the North side of the ship channel is served by the SP. In 1982 the total number of cars handled by the PTRA was 408,444 a monthly average of approximately 34,000 cars.

With the exception of traffic from MKT, most inbound traffic to PTRA (from road lines and HB&T) is interchanged at PTRA's North Yard.

During 1982, experiments introduced by the Houston Terminal Project resulted in the relocation of interchange points for the following movements:

- SP Pasadena Traffic (Pasadena Yard)
- SP Champion Paper Traffic (Hedrix Street)
- ATSF Unior Equity Traffic (Manchester Yard)

During the fourth quarter of 1982 when all three experiments were functioning concurrently, changes in operations had the net effect of reducing by 5,336 per month the number of cars requiring classification at North Yard (20%).

Trains received by PTRA at North Yard are placed on an inbound holding track prior to switching. Traffic is then handled on a first-in, first-out basis with large groups of cars for a common destination (i.e., unit trains) being processed first. PTRA shifts begin at 8 a.m., 4 p.m., and midnight.

The PTRA provides delivery service to three of the four major grain export elevators at the Port of Houston (Union Equity, Cargill, Houston Public). Deliveries are made to each of these elevators once each shift. Each shift, a delivery crew for an elevator places loaded cars and pulls all empties from the elevator yard. To expedite the return of empties to their respective road lines, the delivery crew is also responsible for switching empties pulled from an elevator by road line. Upon their return to the North Yard, the empty grain cars already ordered by destination are placed on their respective outbound tracks. Each time a road line or HB&T makes a delivery of cars to PTRA, it will also pick up any cars PTRA is holding for return. Union Equity grain trains arriving (ATSF) and departing Houston directly from Manchester Yard.

. Santa Fe (ATSF)

Santa Fe traffic in Houston is handled by the HB&T, of which Santa Fe owns 25 percent. The ATSF main line arrives in Houston from the South at the HB&T's New South Yard. Santa Fe main lines connect Houston with Ft. Worth, Oklahoma City, Kansas City, and Chicago. Union Equity Grain trains arriving Houston via the Santa Fe are routed via the SP at Rosenberg, Texas and interchanged directly to the PTRA at Manchester Yard.

. Missouri-Kansas-Texas (MKT)

MKT main lines run from Kansas City and St. Louis through Southeastern Kansas and East Central Oklahoma, to Ft. Worth and Dallas, and then on to Houston, Eureka is its main classification yard with a car capacity of 1,200. City is an industrial yard with a capacity of 210 cars. Road traffic arrives in Houston at Eureka Yard where it is classified and held for subsequent delivery. In 1981 MKT handled 416,267 cars in the Houston area, over 34,600 cars per month providing service to 200 industries.

. Missouri Pacific (MoPac)

MoPac main lines run from Chicago to St. Louis and Kansas City, through Texarkana and Palestine, Texas and into Houston. MoPac connects with many lines not serving Houston in St. Louis and Kansas City.

MoPac owns 50 percent of the HB&T. Its traffic arrives in Houston at the Settegast Yard, the second largest classification yard in the City. Settegast Yard is owned by MoPac, but operated for MoPac by the HB&T. The HB&T performs all switching and making up MoPac trains; however, MoPac personnel operate the mechanical and TOFC facilities.

Settegast Yard is currently undergoing a total renovation. Scheduled for completion in 1982. The modernization project includes automation of switches and upgrading of tracks.

In 1981, the MoPac also opened Lloyd Yard, its new classification at Spring, Texas, just North of Houston. An additional 18 mile main line has been installed between Settegast and LLoyd Yard.

. Southern Pacific

SP, essentially an East-West carrier, is the largest railroad in Houston in terms of volume of traffic and existing facilities. In 1981 the total number of cars handled by the SP in Houston was 1,622,962 over 135,000 cars per month. The SP system in Houston consists of 9 yards with an estimated standing car capacity of 6,370. Englewood Yard, the center of SP operations in Houston, is a large hump yard with a car capacity of 6,400 located on the North side of the city. Englewood serves as SP's classification yard for all traffic in the eastern end of its system. Traffic with a Houston destination is also handled out of Englewood.

The SP also operates another mini-hump yard at Strang, Texas near the mouth of the Houston Ship Channel at Galveston Bay. Strang Yard with a capacity of 920 cars serves chemical industries on the channel and bay area.

The other yards within SP's Houston operations are industrial or storage yards. They include: Polk Ave., Navigation, Chaney, Basin Siding, North, Hardy St., Depot, Strang, and Bell Storage yards. Chaney Yard also handles a small amount of industrial classification. SP services over 693 industries in the Houston area and employs approximately 3,356 workers.

From Houston, the SP serves the west through San Antonio and El Paso, the North through Dallas/Ft. Worth, the East through Northern Louisiana and New Orleans, and Southern Texas from Corpus Christi to Brownsville. The SP is not a part of the HB&T and handles most of its own local switchings and deliveries in Houston.

APPENDIX B

- LIST OF SELECTED ACTIVITIES

  1979-1982

- FMCS NATIONAL CONFERENCE AGENDA

LIST OF SELECTED ACTIVITIES

Houston Terminal Project

List of Experiments

Expediting Empty Private Cars	1979
Industrial PICL Foreman Experiment	1979
Transportation Information Center (TIC)	1980
Expediting Santa Fe Grain Traffic	1980
Carr Street Connection	1980
Firemen Training Program (SP/UTU(E)	1980
HB&T/MKT Interchange Experiment	1981
I/C of ATSF Union Equity Unit Grain Trains at PTRA's Manchester Yard	1982
SP/HB&T Trumix Aggregate Trains	1982
Champion Paper Interchange between SP/PTRA	1982
SP/PTRA Interchange at Pasadena Yard	1982
HB&T/MP Empty Car Distribution Experiment	1982
Expediting ATSF/Basin Yard Outbound Traffic	1982

Seminars/Training Programs

Labor/Management Communication Workshop	October, 1979
Alcohol & Drug Abuse Workshop for Labor and Management	March, 1981
PTRA Management Workshop (for TIES Implementation)	August 17-22, 1981
SP/HB&T Railroad Management Workshops	Jan.21-30, 1982 March 15-20, 1982
Federal Mediation & Conciliation Service - Transportation Problem Solving - A Labor/Management Training Program for Railroads	1982

Conferences	
Houston Iowa Grain Transportation	January, 1980
FMCS Labor/Management Conference on Transportation Problem Solving	December, 1982
Major Studies	
Terminal Information Exchange System (TIES)	1978
Texas City Terminal Study	1980
Houston/Iowa Grain Transportation Committee	1980-1981
U.S. - Mexico Rail Car Interchange Committee	1981
HB&T/PTRA Mechanical Consolidation	1981
Rail Traffic Control	1982

**Detailed Completion Reports for each activity listed are available upon request to the office of the Houston Terminal Project

AGENDA
LABOR/MANAGEMENT CONFERENCE
ON
TRANSPORTATION PROBLEM SOLVING

December 8, 1982

8:00 AM Registration

8:30 AM Introduction and Conference Objective:
Moderator: D. K. Joiner
Director, Houston Terminal Project

8:45 AM Welcome: Clentine Cashion
Director of Protocol, City of Houston

9:00 AM Labor/Management Cooperation: Industry Perspective

Railroad viewpoint:
Road Haul Carrier -
W. J. Lacy, Vice-President/Transportation Co.
Southern Pacific Transportation Co.

Terminal Switching Carrier -
H. W. Ritter, President & General Manager
Houston Belt & Terminal Railway Co.

Film: Railroads Vital to a Growing Houston

Labor viewpoint:
F. T. Lynch, International Vice President
Brotherhood of Railway, Airline and Steamship Clerks

Government viewpoint:
Peter Regner, Director of Labor-Management Grant Programs
Federal Mediation & Conciliation Service

10:00 AM Break

10:15 AM Training Program Overview: Sue Lodge.
Harbridge House, Inc.

. Needs Analysis
. Training Strategy
. Workshop
. Labor/Management Committees
. Evaluation Process - Everette J. Latiolais

10:45 AM Labor/Management Programs: Rail Industry Experience

Panel Moderator: Scott Harvey, Dir. Labor Mgmt. Studies
Association of American Railroads

Panel Members:

Milwaukee Labor/Management Action Group:

D. L. Schrupp
Operating Labor Representative

M. R. Rommelfanger
Operating Labor Representative

Conrail Labor/Management Project:

C. Bethge
Co-Director

Houston Terminal Project:

C. L. Little
Co-Director

P. B. Collins
Assistant Director

11:45 AM Lunch

1:00 PM Training Program: Sue Lodgen
Harbridge House, Inc.

. Group Participation in Problem Solving Process

2:30 PM Break

2:45 PM Transportation Problem Solving: HB&T/SP Experience

Panel Moderator: Diane Young
Consultant, Houston Terminal Project

Oversite/Steering Committee Panel Members:

L. S. Young, Gen. Chairman, United Transportation Union
Brenda Marsh, Claims Examiner, Southern Pacific Transportation Co.
D. W. Yates, Manager/Human Resources, Houston Belt & Terminal Rwy. Co.
D. L. Kemp, Communications Foreman, Houston Belt & Terminal Rwy. Co.

Sub-Committee Panel Members:

R. D. Tant, Communications Maintenance Technician, Houston Belt & Terminal Rwy.
Lou Ann McClendon, Clerk, Houston Belt & Terminal Rwy. Co.
Mary Meyers, Clerk, Southern Pacific Transportation Co.
Donny Hickman, Yardmaster, Southern Pacific Transportation Co.

4:00 PM Next Step: Sue Lodgen
Harbridge House

. Evaluation Results - Everette J. Latiolais
. Check List
. Follow-up Technical Assistance

4:30 PM Conference Adjourns

Senator JEPSEN. Thank you, Mr. Joiner. And now the codirector of the Houston terminal project, C. L. Little.

STATEMENT OF C. L. LITTLE, CODIRECTOR, HOUSTON TERMINAL PROJECT

Mr. LITTLE. Thank you, Mr. Chairman. First I'd like to say that when I was selected labor codirector of the Houston terminal project, I've spent about 90 percent of the time trying to fill the shoes of Freeman Anderson. I don't know whether you noticed it or not, Senator, but they're size 13, so it's a pretty big role to play.

Mr. Chairman, this afternoon I would like to offer some personal observations about my participation in the activities of the Houston terminal project and the involvement of labor in improving rail transportation service.

I am an alternate vice president of the United Transportation Union and general chairman representing yardmen on the Houston Belt and Terminal Railroad. Before I was elected labor codirector of the Houston terminal project my view of the railroad industry and how it was operated was limited to the confines of switching on the HB&T Railroad. I could see the results of management decisions and often I was directly affected. To me and my coworkers, many of the actions of management did not make any sense at all. We felt the best way to solve the industry problems would be to give the management a smart pill.

My involvement with a labor-management project, however, has provided the opportunity to meet managers from different levels and different railroads. The discussion of transportation service problems in a nonadversary environment has given me a better understanding of the various aspects of railroad operations. I have become more aware of the needs of the shippers and the importance to both labor and management of meeting their transportation needs. I have also had the opportunity to provide management with a better understanding of labor needs and objectives.

These experiences have given me a new and broader viewpoint. I am in a better position to evaluate a proposal for change in operations and determine its impact on labor, management and shippers. I feel that I am better equipped to serve the union members I represent. I have also been able to use my working experience and detailed knowledge of switching operations to contribute to the design of these experiments.

What my experience indicates is that the rail industry and the shipping communities will benefit through the greater involvement of labor in the railroad business. Labor can also gain a better understanding of management and, in turn, management will have a better appreciation of labor's organization, goals, and objectives. Labor involvement on a nonadversary basis also provides the opportunity to utilize the knowledge and experience of the men on the ground. This is a vast resource which is now not being fully utilized. The end result of labor management will be an increase in productivity and ongoing mechanisms will be established for making better operating improvements.

I have also noticed that positive change becomes popular. For example, through the Houston terminal project, we developed an approach for dealing with alcohol and drug problems within the oper-

ating crafts. Quickly thereafter, the other nonoperating crafts developed similar procedures for their people. This is a good example of when the initial implementation is successful, the program is adopted and extended by others. In my opinion, this will be true on a national scale as well as locally.

Mr. Chairman, I hope that my personal experience illustrates the potential and the need for labor involvement in the rail industry. I hope that you will support and encourage this approach as one way to improve the transportation service and to help the users of transportation to compete more effectively in both domestic and world markets. In this way, labor, management, and transportation users will all be better off. Thank you very much.

Senator JEPSEN. And I thank you and every member of the panel. I would like to start the questions with something that would be of interest, I think, to all of us. To Mr. Till as the Deputy Administrator of the FRA of the U.S. Department of Transportation, would you care to comment and elaborate for the committee on DOT's future plans with respect to continued support for the activities here in Houston?

Mr. TILL. Senator Jepsen, I think that our level of activities that are planned for fiscal year 1984 beginning on the first of October will be substantially comparable to the levels of support provided in this latest fiscal year. I think it's important to note that this kind of support will not and need not go on indefinitely, because the kind of process that has gotten underway, the kind of activities that have been carried out once the effective team of labor and management was put together, certainly was a varied participation. But I think most importantly, with a definite focusing on the problems at hand by interested and dedicated members of management team and labor team, I think those kinds of things can maintain their own momentum. FRA has been in the business of trying to spark labor-management cooperation for a long time. I think it's no accident, for a number of reasons, that the activity here at the Houston terminal project has been what I think can be characterized as FRA's most successful effort at serving as a catalyst for this kind of activity. One thing in addition to the unique mix of people who wanted to solve the problem, one thing that has occurred in this time frame and has helped a great deal and will help us in future efforts at this time, is the onset of deregulation. I think this has increased the competition both from the trucking industry as well as from other railroads in the transportation system. It has brought both labor and management a new understanding of the importance of doing business in a businesslike manner and not managing from the standpoint of trying to operate as if you're playing a regulatory game but as if you're operating as a businessman. Once you change from a regulatory focus to a business focus, I think it allows you to communicate to the work force much more effectively the importance of changing things so that you can keep up your market share and improve your market share, increase your efficiency, reduce your costs; and gain more traffic and revenues and compete more effectively with other railroads in the system, other ports and other modes of transportation such as barges and trucks. I think that spurring factor combined with the absolutely excellent cast of participants here in the Houston terminal area has been a mix that allowed Houston

to be the most effective project in FRA's history in sparking labor-management cooperation.

Senator JEPSEN. I certainly would echo that. I think the Houston experiment has been most successful. In fact, so much so, that sometime before this panel leaves I want a comment from any and all on whether we ought to expand the scope and initiate some similar projects in other ports in other parts of the country. You are all aware of the country's desperate need to improve our competitive position in world markets. To what extent has the Houston terminal project contributed toward fulfilling that objective is something that we might address. I intend to make that my last question for anyone on the panel. Right now, I have a very noncontroversial, very easy, subject to broach. Mr. Till, would you like to give us your views on the advisability of port user fees and expand your remarks to include in them waterway use fees as well?

Mr. TILL. I think the Department, Mr. Chairman, has been on record for sometime in terms of its own views and on behalf of the administration in recommending port and waterway user fees. I know that the matter is caught up in litigation at this point, particularly in regard to inland waterways. But I would just say that the system cannot work as effectively as it ought to if some modes are subsidized and other modes are not. To the extent that public moneys are being spent to benefit a particular mode of transportation in cases where they are competing with other modes of transportation which pay either all or some substantial portion of the costs of operating and maintaining their rights-of-way, then I think as long as that kind of subsidy is in effect, it is harming competitors; in this particular case, most substantially rail, and to the lesser extent the trucking industry which pays some but not all of the costs of operating its over-the-road trucking fleet. Quite frankly, it has been a nonpartisan issue. I've been associated with the Department of Transportation for some 12 years, and throughout all the administrations that I'm aware of both Democratic and Republican, the general position in favor of developing a fair and equitable scheme of inland waterway user charges in particular has been advanced or supported to a greater or lesser extent by all of those administrations.

Senator JEPSEN. I thank you. Does anyone else have a comment on that?

Mr. BAUMEL. Senator, I'll just make a couple of comments on that issue. On the issue of port user charges, there is some question whether grain shipments would benefit from deepening of ports. There are only three ports in the world that can take vessels of 45-foot draft or more. So most of the grain will continue to be shipped in vessels of current sizes. It does raise the question of what benefits will grain industry and agriculture, in particular, gain from port user charges. I understand the argument for port user charges, for deepening charges, from the standpoint of coal; but I raise the point that there's substantial doubt whether grain, and farmers in particular, will get any benefits from deepening of ports. On the inland waterway user charge question, the condition of the inland waterways is becoming similar to what the condition the railroads were in in the late 1950's and 1960's, deteriorating very rapidly. If that system is to remain a competitive force, significant improvements are going to have to be

made. It does raise the question of how it would be financed. I'd like to say that if user charges are imposed and are passed on to barge loading facilities and, in fact, farmers, there will be some diversion to railroads, a question about that. That makes this Houston Port terminal project even more important in handling that diversion volume in a very efficient manner.

Senator JEPSEN. Mr. Baumel, I'd like to ask you first of all to verify if it is correct at the present time that Iowa shipments of corn and soybeans has shifted very dramatically from one port to another; for instance, have low barge rates on the Mississippi caused a shift in Iowa grain and soybean shipments from Houston to New Orleans? Has that taken place?

Mr. BAUMEL. Yes, that's true. In the late 1970's and the early 1980's, Houston was the major outlet for Iowa grain. Today that's not so, principally because of the reason you mentioned. The excess barge supply, the declining grain exports, resulted in record low levels of barge rates. Most Iowa grain going to export today is moved by barge. However, when they increase, barge rates will go up as quickly as they went down, and grain will again move back to rail and back to Houston. The other issue relative to exports is that the project here in Houston will keep the United States—help maintain its competitive position in world grain trade and help to overcome tariffs and other kinds of barriers that are being imposed by importing countries. I would argue that this kind of cost-reducing activity is very beneficial to farmers in trying to promote increased grain exports.

Senator JEPSEN. Well, from what I saw this morning with the improved handling facilities, such as at the Cargill plant, the turnaround time certainly has been improved and the unloading time reduced. The rails have to facilitate to keep the unit trains intact and their integrity together. Would you say that the Houston terminal is prepared to take and handle considerably more than they're doing now? Our experience has been in 1973, 1979, and 1980, when grain movements literally leaped. If grain traffic does experience some similar circumstances in the future, is Houston going to be able to handle it?

Mr. BAUMEL. Certainly they'll be able to handle more than during the surges in the 1970's and at a lower cost, which should increase agriculture income.

Senator JEPSEN. Do you think the Midwest, specifically Iowa, Illinois, Nebraska, and Missouri, is aware of the facilities and improvements that have been made down here?

Mr. BAUMEL. I doubt that they're fully aware of the improvements here. It's very difficult to visualize the improvements unless you physically see them. I think it would be worthwhile to have an effort to inform upper Midwest shippers particularly Iowa shippers of the improvements that have been made down here.

Senator JEPSEN. As chairman of the Houston/Iowa Grain Transportation Committee, do you think it might be in order to invite various parties to Iowa and invite those from Iowa to a centralized point so that we can do two things: Exchange ideas and help tell the story of what has taken place here? That's something that we might well be advised to do. I'm making a statement but asking a question at the same time. What do you think?

Mr. BAUMEL. I think it's an essential step that must be taken to let Iowa people know about the improvements that have been made down here. We can best do that by inviting our friends in Houston to come up and tell the story; at the same time, get the advice of Iowa shippers and Iowa railroads on what projects should be the next to undertake.

Senator JEPSEN. Would you want to make any observations with respect to Midwestern grain moving to gulf ports and what you might project?

Mr. BAUMEL. Well, I think in the near term, they'll continue to go down the Mississippi River in large volumes to New Orleans until we have an increase in grain exports. When that happens, barge rates will increase sharply as we saw. Barge rates on a very temporary basis in August went up 250 percent of tariff, 265 percent of tariff in Minneapolis, principally because they couldn't get barges up there quickly enough. It does illustrate the volatility of barge rates and how quickly grains will shift back to rail when barge rates do indeed increase. While the improvements are not attracting the grain that Houston railroads and export elevators would like to see, they can certainly look forward to that happening when grain exports do get back to their earlier levels.

Senator JEPSEN. Well, the Houston project certainly saved Midwest farmers considerable money. I think now they're beginning to appreciate that fact.

Mr. BAUMEL. Yes; I think it has saved Midwest farmers money, and I think that story needs to be told.

Senator JEPSEN. As Director of the Office of Transportation, U.S. Department of Agriculture, Mr. Fitzpatrick, do you have any comments on what we've been talking about?

Mr. FITZPATRICK. Well, I generally concur with Mr. Baumel's assessment of the inland waterways' influence on rail rates. I think over the past 2 years, the inland waterways have been the price setter for transportation rates, and the railroads have followed in their pricing in response to the prices set by the waterways. I see continuance of having movements down rivers, but it's hard to predict just at what point it could happen. Having movement through Houston and other gulf ports could begin if the fluctuations in the river rates went up unexpectedly. In terms of the port user charges, Mr. Chairman, I again concur with Mr. Baumel. The Department of Agriculture has taken the stand of supporting site-specific user charges for ports: that is, every port paying for the improvements they make; simply paying their own way types of approach as opposed to an overall user fee where all ports would contribute to a till which would be used across the board. We think the site-specific approach is most beneficial to agriculture since there are a few number of ports which are heavily used by agriculture. We also believe that 55-foot drafts or deep-draft ports at this time do not really assist agriculture. Most agricultural interests are not in support of the deep-draft ports because we simply don't need them at this time. In terms of inland waterways fees, we believe that the systemwide fee should be used to assess the inland waterway users on cost recovery. There's one more point I'd like to make and I'm conveying the Secretary of Agriculture's regards to

you and his concerns about this project and the efficient movement of grain through all ports. He believes, as I do, that the Houston project can be used as a methodology to apply to other ports which have similar congestion problems. Hopefully in the future, we will look at projects as mentioned before in other places like Kansas City and Seattle, Wash. Thank you, Mr. Chairman.

Senator JEPSEN. Thank you, I have been advised that Merlyn Groot, who is the past chairman of the Transportation Committee, American Soybean Association, one of our national leaders for a long time in that association, is here on his own time, his own money. I understand that he has a plane to catch. Would you please come forward? At this time I'd like to take things a little bit out of order and have Merlyn Groot go ahead with his testimony.

STATEMENT OF MERLYN GROOT, PAST CHAIRMAN, TRANSPORTATION COMMITTEE, AMERICAN SOYBEAN ASSOCIATION

Mr. GROOT. Thank you, Mr. Chairman. Wayne Bennett, who has succeeded me as chairman of the ASA Transportation Committee, will be giving prepared remarks on the overall objectives of transportation from the farmers' standpoint. I would like to direct my comments more to the Iowa farm level and some observations in that situation, having followed some of the transportation issues in agriculture primarily with Mr. Baumel since the early 1970's.

Since we are in a period of time when we have reduced volumes, it still may be worthwhile to review the early 1970's that brought rapid expansion of export sales and increased production acreages combined with heavy movement of commodities by rail, water, and truck. These were highlighted, of course, by several things. One was the Soviet Government's decision to make large volume purchases for their internal consumption. The movement in Soviet grain took place, while at the same time in Iowa we have seen some deterioration of the physical condition of some railroads, particularly the branch lines. Some movement of grain from rural areas became difficult to operate.

So it was two things kind of working at cross purposes which helped to accent and aggravate the situation. And we did notice the periodic shortages which have been referred to and available railroad cars, and this intensified and reached a peak in about 1979. Farmers were heavily dependent upon railroads, particularly in those areas some distance away from the rivers, such as the grain producing area of Iowa, central and northern sections.

They saw increasing evidence of various waste. Some of these have been mentioned and Mr. Bennett will give some examples of this. In the added freight charges, as far as the local situation, there was a 15-cents-a-bushel surcharge put on which, of course, affected the price paid to farmers, which was one of the evidences of additional freight charges. I also looked in my file yesterday and I brought about four copies of former grain contracts which were made at different times for future delivery. During that period, because of the problems that elevators were facing, one of the ways that they had in view of this was to make a notation on the contract which listed the existing cost of freight rates at that period of time. Any additional increases in freight costs that took place between the signing of the contract and

the actual physical delivery and settlement on the grain was deducted from the farmer's price that he received for the grain he delivered. So farmers became very much aware of what was going on and the problems.

They saw ports being temporarily embargoed because of congestion, which is going to be referred to, and also delayed payments for grain. Some of this involved the fact that the cost of inventory of carrying grain since the turnaround time even for unit trains was running from 21 to 27 days at times.

This additional 3 to 4 weeks of carrying the cost of inventory would amount, in the case of soybeans, possibly 6 to 8 cents a bushel, and in the case of corn, probably 3 to 5 cents a bushel. You can see that when elevators were operating on a 10-cents-a-bushel margin, they could see most of their margin if not all of it disappear simply on the inventory cost. So their choices were either reduce the bids to farmers to cover that whether they had the charges or not, or else to delay the payment to the farmers for the grain and simply pay the farmers whenever they received payment of the grain when ultimately unloaded at the destination.

Also one obvious way that has been referred to was the unit trains were returning in split patterns. They might arrive in 2-to-5-to-10-car units over a period of a week or so. A large part at that time of our railroad capacity in Iowa was also tied to a joint freight-rate structure to the Port of Houston, and thus the attention with Iowa and Houston tied together. Some of this was related to the fact that the Rock Island Railroad—a large mining system in Iowa which assembled grain had the joint-rate structure to the Port of Houston, and also the Chicago Northwestern. Just one of the things also if you're looking at the future and some possible increase, the settlement of the Rock Island bankruptcy system in changing from directed service to the Chicago Northwestern if in fact to start that operation. hopefully would add to any increased volume which we see in the future which would then make a potential increase toward the Houston area in the next few months.

These problems, which we can list and have been referring to, result in lost value to the entire system from the farmer to the export terminal. We've seen the prices reduced to farmers. We've seen increased costs the elevators were having in handling and dealing with this problem; the railroads were having some additional costs and delays and not getting the turnover and the return on their investment; the grain export elevators had some problems in getting corn and cars unloaded. What we have seen was that the value that was lost was lost throughout the entire system. There was no one segment which was getting benefit from us. It was a total loss throughout each point.

Adding to this, this additional information which we've seen indicated if the trends in export indeed followed through on the decades of the 1980's, at some point during the decade would meet the transportation capacity of the railroads as it existed at that time if no improvements were made. So we see questions being raised by farmers because farmers in 24 States now do have checks in supporting market development overseas. This amounts to about $51½ million annually of farmers' checkoff money investing in 76 countries of markets for soybeans. Added to that you have feed grain checkoffs and wheat checkoffs.

The question began to arise about the wisdom of spending increased checkoff dollar investments to expand checkoff export markets under these circumstances if there was going to be continuing problems.

Thus, the Houston project was very timely and those involved such as the labor-management task force, Houston Port and Terminal Authority, shippers, receivers, and Federal Rail Administration, as well as university specialists and yourself and your own office, in the case of Iowa, coordinated this. I can personally vouch appreciation for this at the farm level for your part that was played here. If we look at some of the benefits, because in investment we need to recognize what we have accomplished from the farm level, these potential successes could include the terminal project as capable of making major contributions to increases of efficiency by concentrating on relatively small areas of concentrated problems such as terminals. Also, substantial improvements in efficiency can be achieved by more rapid turnaround of unit trains which improves railroad operating efficiency and lowers the capital investment required, which ultimately is reflected in better freight rates and, of course, better prices to farmers. These improvements make railroads more viable, and ultimately gives farmers more options or alternatives in selling their grain. What we were seeing in that time of congestion and transportation problems was that elevator managers were not able to merchandise grain. They were simply loading cars because of the congestion. Any car that became available they simply loaded it to get the grain on wheels and move it somewhere so that they could get it on its way. Basically, it was a matter of trying to get railcars full. They really had no options for merchandising the grain. Also, this improved transportation efficiency which resulted in better benefits to farmers.

I can give a personal example locally: Since we are on the Illinois Central Gulf rail line which serves our own local area, there was a joint freight rate made available some time back, which was very competitive at that time. Of course, with the barge movement, that has probably not been used very much. Yet, it is a mechanism which is a cushion and a safety valve which, if I recall the figure given to me by the elevator manager, I believe it was about 5 cents a bushel freight cost advantage which he offered as a joint rate, which simply did not exist or could not exist under the problems that had been previously. Also in an era of deregulation, it allows the railroads to have a better chance to succeed in the challenges of self-regulation, if they are more efficient and more competitive. In my notes that I have received from Pat Collins, one of the things that I notice at the end was the question, where do we go from here? Not being familiar with details, and not being in an expert position, I can't come up with a lot of solutions. I do have three general areas that I thought might be worthwhile to mention. Some of these run to some of the points that have already been mentioned. Maybe Phil Baumel and I have attended too many meetings together when we start talking the same way. First of all is to identify other port areas that offer potential for greater efficiency. Those port areas could be other ports or it could be internally within the ports themselves. The people here in Houston have indicated even today, they continue to look at that.

Second, to identify support areas such as gateway terminals for possible projects which support and feed the increased capacity that

takes place such as Houston. The third item was the increased use of technology such as computer management of rail equipment, interchangeable throughout the system; not just within railroads themselves but maybe between railroads and throughout the system, so that that efficiency which has been demonstrated might be applied throughout the rail system. The number that I understand that has taken place in the Houston terminal is that the capacity has been increased about 40 percent as a result of this. Certainly as we look at the numbers, we are down as far as grain production now in feed grains. If we put the numbers together with substantial wheat crop which was not affected as much by the drought, and substantial carryover, if we look at potential number of corn production next year which some people are talking about, plus rebound of soybean exports, and the improvement of overseas economies, I think the numbers are there. Somewhere along the line we're going to need some of that capacity. Certainly if I was going to describe the attitude here in Houston, it is certainly a can-do spirit. It has certainly been gratifying for me personally, and I have been pleased to be involved to the level that I have attended meetings. I really appreciate it, and I appreciate the invitation to be here, and thank you for your leadership.

Senator JEPSEN. Mr. Groot, could you possibly put a dollar figure on the savings by just Iowa farmers during the last 4 years as a result of the Houston project? I admit that may be a difficult question. Perhaps, Mr. Baumel might want to add something.

Mr. GROOT. I would also have Mr. Baumel give his estimation. If we look from the standpoint of soybeans alone, about 50 percent of the crop being exported on feed grains, possibly 30 percent being exported. On soybeans, if we take an individual case, 300-plus million bushels a year, we're down below that this year a little bit, but roughly 150 million bushels. If we're looking at savings in freight costs and handling problems of 5 to 10 cents a bushel, you take 10 percent of 150 million bushels and you start counting up substantial savings. Multiply that each year, because this is a savings which returns itself annually. Also, simply continuing to be able to meet the delivery and supply needs when people depend on these agriculture exports for food. So we can run probably several million dollars a year in benefits which may not be out front and identified but simply are realistically regarded as money in farmers' pockets.

Mr. BAUMEL. I might add to that, Merlyn, that there's another component: The ability to move the grain through the system when the prices are high. It may mean even more dollars to the farmers than the numbers you just talked about which I agree with.

Senator JEPSEN. Bob Tosterud, on my left, is an agriculture economist with the Joint Economic Committee, setting up and coordinating all the agriculture activity on the committee. John Conrad, on my right, is the special projects director from my office for everything including Iowa and anything else we might do. Do either of you two gentlemen have any questions at this time of anyone on the panel here?

Mr. TOSTERUD. I would just like to follow up on the last comment made. If I read you correctly, Mr. Groot, we're looking at about $6 million for the State of Iowa over the last 4 years.

Mr. GROOT. I guess. I haven't calculated it out, but you're talking about real money.

Mr. TOSTERUD. Now my question is to Mr. Joiner. What kind of a cost-benefit ratio would we be looking at for the Houston project? If we're looking at $6 million of benefits to just Iowa farmers, and you know your own budget, can you give us any feel for the rate of return of the Houston project?

Mr. JOINER. Just as it relates to just this one item, our budget would be approximately $0.5 million a year.

Mr. TOSTERUD. Twelve to one. That's pretty good.

Mr. JOINER. Fair return.

Mr. LITTLE. That does not include some of the other activities that we've been included in also. We're actively included in moving of limestone, gravel, and what have you. See, we're making quite a few changes and helping in those areas, too, which cuts down substantially on the congestion in each one of the yards in the city of Houston.

Senator JEPSEN. As Mr. Fitzpatrick mentioned in his remarks, it's a two-way street. The farmers benefit both ways when we get into production and where markets improve. We're talking about bringing back from the ports the fertilizers and the other things from down here that will benefit everybody; is that correct?

Mr. LITTLE. That is correct, and also your big contractors. When we make changes in the labor agreements through experiments that allows to set up different interchange points which a lot of times are closer to construction sites. It's quite a bit of savings there. That wouldn't be included in what Merlyn was talking about.

Senator JEPSEN. I want to move along here. Railroad deregulation has been addressed just briefly in several of our comments. Is there anyone who would want to make any comments with regard to what effects to date that rail deregulation has had on either agriculture or the railroads?

Mr. FITZPATRICK. This is an exciting topic, Mr. Chairman. I'm glad you asked that question. In 1982 the U.S. Department of Agriculture published a report called the Impact to the Stagger's Rail Act on Agriculture. In that report, it found in aggregate that from 1980, the time the Stagger's Act was passed, until 1982 the aggregate rates of transportation for agriculture had gone down. Certain regions had gone up and certain regions had gone down, but overall the farmer had benefited in that period from lower rates. Now, the lower rates were not totally due to deregulation, and to what extent it was deregulation is unsure, but there are other factors including the fact that the economy was not strong at that time. There was a surplus of transportation equipment and services. We are somewhat sure that deregulation allowed the railroads to lower their rates more easily than they were in the pre-Stagger's period. Since that time, we have been concerned about several issues. We're concerned about the frequency of cancellation of joint rates and routings. That is, when a long move is made from California, let's say, to New York by railroad and it takes a couple of railroads to make that move from end to end, it is allowed under the Stagger's more freedom to cancel a certain route by one railroad. This has happened to some extent. At this time it has not impacted agriculture in a tremendous way, but could very well in the future if these kinds of cancellations continue. We also are concerned about the fact that when a contract is made between a railroad and shipper, the terms of those contracts are not released to the public so that other shippers

can view what is in those contracts. Before 1980, all rates and tariffs for railroad marketing were published in the railroad guide, and today those rates are still published; but the addition of contracts allows some of the rate information not to be disclosed which can impact upon shippers very negatively when they don't know what their competition is doing. So information to the farmer is very important, and we think that contract rate information should be disclosed. In general, Mr. Chairman, I support the concept of deregulation but when you've had 100 years of regulation, you must be slow to change it. You can't change the way in which an entire country and entire agricultural community ships their products in a short period of time. We just ask that the Interstate Commerce Commission, from a Department of Agriculture standpoint, be very cautious and take time in considering the impacts of their decisions on the agricultural community.

Senator JEPSEN. Mr. Till.

Mr. TILL. Yes, Mr. Chairman, I'd like to make a few remarks. I would concur with Mr. Fitzpatrick's remarks, about the fact that during the last few years since the Stagger's Act has been in force, that the number of rail rates for bulk commodities has decreased and that is reflective not only in the fact that the railroads have a responsibility to change their rates but also the fact that there is generally excess capacity within the rail system and trucking system and barge transportation system. It's been true for coal as well as for grain and other bulk commodities. Also with the freedom to alter rates without excessive administrative process, I think we've seen some cooperative efforts between rail and waters. There are now rail-water movements of grain moving through the gulf ports that simply didn't exist before because railroads are now thinking more like businessmen which is much in concert with the kind of remarks I made before about the beneficial effect of deregulation on the Houston terminal project and on rail labor management and rail management activities, in general. With regard to the contracts issue, I think that contract rates are going to be an increasing element in the transportation of bulk commodities. I do suggest that we ought to look at whether or not it should be required for rails to disclose their contract rates when trucks and barges simply don't have to disclose their rates. I think we have a one-sided view of the world that needs to be worked out equitably for all those concerned, not simply for rails; to keep them publishing things that they had published in the past and their competitors didn't.

With regard to the overall issue of deregulation, I can say that perhaps the best experience we have in looking at deregulation, the most comparable experience to the United States, is what happened in Canada. We happened to have substantially deregulated railroads at a time when the economy was going into a substantial recession. I think that it's not fair to judge what has happened on the basis of the performance of the last few years. Even if you look at it on the basis of the last few years, I think that the positive indications are much, much more in evidence than are negative indications. Certainly there have been abuses, and accidents by railroads in the process of learning how to act in a deregulated environment, that they probably will reverse if they haven't already. There are changes being made, but they have to learn. After 100 years of operating in an adminis-

trative environment, you don't learn how to be a businessman overnight. It took the Canadian railroads, after deregulation in 1967, about 6 to 8 years to adjust pretty much completely to deregulated environment. I think because of the competitive environment here and the impacts of recession, that our railroad system is adjusting much more rapidly than the Canadian system. I would expect that we are going to see continued improvements over the coming years at a much more rapid pace. I think that to the extent that there have been moves in the wrong direction, or excessive moves under deregulation, that these things are going to reflect themselves in a business environment and they are going to become evident to railroads. They're not in the business of going out of business. To the extent that they've made decisions in the short run of a deregulated environment that are not in their long-term best interests, the marketplace is going to tell them that. I think there are adequate protections for both shippers within the confines of the Stagger's Act. I think we just need a little bit more time for those things to work out. I think it's going to be to everyone's benefit.

Senator JEPSEN. Very interesting. Anyone else before we close the panel? Mr. Baumel.

Mr. BAUMEL. Senator, it may be a bit early to tell what the impact of the Stagger's act is on farmers, but the evidence thus far is that farmers themselves are better off under Stagger's than under the old system. They have new rates which have opened up significant numbers of new markets that have never been available before. We have many more rates to the river than we had before. We have short-term rates that have never been published before. Obviously, we've seen rates go down, and when the market turns around, we'll probably see rates go back up. That suggests to me that the Houston terminal project and the Houston/Iowa Grain Committee activities of reducing railroad costs and increasing capacity will help temper any rate increases that will come about as the market rebounds. I think that great benefits for the Houston project will be realized in a deregulated economy.

Mr. FITZPATRICK. I'd like to comment on Mr. Till's statements. I generally agree with Mr. Till about the time it takes for railroads to adjust in a post-Staggers environment, and I think the encouragement and responsibility on the part of railroads in working these things out is a good one, and I concur with that recommendation. But I also just returned from hearings that the U.S. Department of Agriculture conducted throughout the Midwest, and in many cases small shippers who had asked for similar terms of the contracting, in other words, went to a railroad and said, "We'd like to contract just like some of your bigger customers contracted," and in some cases the door was closed to them. They were not given any hearing about their concerns. This is not in public record and this is the kind of thing that we are concerned about in the Department. We do support deregulation but we are concerned about these kinds of activities.

Senator JEPSEN. We are going to have to move along here. Are there any closing comments? Mr. Joiner.

Mr. JOINER. Well, one issue you brought up, Mr. Chairman, earlier was the transferability of the Houston project. Since I work for the Houston project, you naturally assumed I would say, "Yes; it should

be transferred to other locations." I have to say that the concept is a good concept in my opinion, but before you can have a project like this in any city or gateway or port, you have to have management people who are willing to be very innovative in the way that they operate, and labor people who are willing to say, "I can make changes in my labor agreement without having to have additional arbitrators," and so forth. You have to have a commitment from your funding agencies for a long term, not a short term, because you can't build trust up overnight. So if this is expanded to another area, it would have to meet all of those criteria.

Senator JEPSEN. Any further comments?

Mr. LITTLE. I would just echo what Mr. Joiner has said.

Senator JEPSEN. I thank you. Merlyn, do you have any closing comments?

Mr. GROOT. It's been a great experience. I've enjoyed it immensely, and I've made some friends down here. It's always nice to be back. I almost hate to see it end.

Senator JEPSEN. I extend my gratitude to all of you, and I thank you very kindly. I will suggest and ask for those, who would be willing to do so, to send us in writing where they think that we may use what has been learned here from the project in Houston, where we might apply this with operations at other ports; which ports, in your judgment could benefit from a Houston-type project. Elaborate on it, and that will be asked and requested from everyone.

At this time I excuse this panel and would ask that to my left would be James Fitzgerald, Daniel Collins, H. E. Handley, and George Gagen. To my right is J. R. Curtis, Frank Hemmen, and Wayne Bennett.

Gentlemen, we'll start just arbitrarily with J. R. Curtis, who is the director of operations of the Houston Port Authority. You may proceed, Mr. Curtis, in any manner you so desire. I would advise this panel that if you have any prepared statements, they will all be entered into the record as if read.

STATEMENT OF J. R. CURTIS, DIRECTOR OF OPERATIONS, HOUSTON PORT AUTHORITY

Mr. CURTIS. Thank you, Mr. Chairman. The Port of Houston Authority, along with the Greater Houston metropolitan area, experienced a rather severe economic downturn that started probably about 18 months ago, in May 1982. Prior to that time we had been very fortunate in that the public facilities at the Port of Houston Authority enjoyed near maximum utilization over a long period of years even with expansion that took place during that period of time. It was best illustrated by the fact that in our general cargo facilities, we enjoyed about a 70- to 80-percent berth occupancy.

Due to this economic recession, for the first 8 months of 1983, vessel arrivals in the port declined 19 percent compared to the same period last year. Further, our general cargo, excluding dry and liquid bulk, declined 41 percent in the same period. I have not said this to express pessimism. On the contrary, it is to preface a report on expansion, modification, and major maintenance of port authority facilities so as to place us in a position to accommodate even greater volumes of ships

and cargoes which we are certain will be available in an improved world economy and insure that the Port of Houston will retain its position as No. 1 in the Nation in foreign trade tonnage.

During this period of reduced volumes, both ships and cargoes, the port authority has under construction one new wharf in the Turning basin area, wharf No. 32, on the north side of the channel immediately downstream of the loop 610 bridge. This is an 800-foot wharf which will be backed by approximately 15 acres of paved open area, with no grade separation between face of wharf and the extremity of the backland. While this facility will serve the importation of discharging vehicles and steel products, and so forth, the primary use is intended to be for assembly and shipment of the project-type cargoes so important to the Port of Houston destined for the Middle East, North Sea, South America, Mexico, Indonesia, and other developing areas. Major repairs have been completed to open wharf No. 17. When I say "major," this was to the tune of about $2½ million. Transit shed No. 12 has been demolished and modifications completed to provide an additional open wharf. Now, this was an old wharf with sheds over about a 6-berth distance. By creating an open berth, we essentially made three good berths out of what had been three bad berths. We have a contractor currently well along with total replacement of the timber fender protection on wharf No. 20, another open berth. A contract is being executed at this time for major rehabilitation of wharf No. 8. Our transit shed siding replacement has been brought current and major transit shed roof repairs are underway. Roadways have been extended and repaired and are in excellent condition at this time.

At our intermodal facilities at Barbours Cut, terminal wharf No. 4 is scheduled for completion on or about December 1, 1983, with phase I of the backup container terminal due to be completed shortly thereafter. Subsequently, contracts will provide for phase II which will complete drainage, underground utilities and paving of the entire 36 to 40 acres of backland included in this terminal. Two electric container cranes are being fabricated with erection scheduled for completion near the end of March 1984, to make this new berth and terminal available for the services which we hope and believe will be coming to the Port of Houston by that time. Additionally, at these same facilities, plans and specifications are being prepared for construction of a 100,000 square foot transit shed as added capacity to a similar shed now being installed in inspection/interchange lanes serving berths and terminal Nos. 1 and 2. We have gotten authority and are proceeding to purchase 2,000 feet of steel sheet pile which will be driven as the retaining wall for berths Nos. 5 and 6 at our Barbours Cut facility. This, of course, will greatly expedite construction of additional berths at a later time. Dredging alongside the berth of a turning point in the extremity of the Barbours Cut Channel will also be completed very shortly. This will allow the vessels to turn in the Barbours Cut Channel as opposed to presently having to back out of this channel.

All of the foregoing is in progress or recently completed. Prior to this, major modifications were completed at our wharves Nos. 41 through 48 which greatly enhanced our capacity for handling cargo at these berths. A 50-foot add-on section on the waterside of wharves Nos. 41 through 44 was demolished to provide for a 90 foot, as opposed to the preexisting 40 foot, open wharf aprons. Partial demolition of

old cotton receiving platforms has provided open area behind these wharves which, with construction of an access ramp which allows vehicular movement direct from landside to wharf aprons, further enhances cargo-handling capability at these facilities.

Previously to this, approximately $5 million was expended in improvements at our public grain elevator. The major project was a new dust collector system with substantial improvements in the electrical substation and additional fire escapes from the head house, a new passenger elevator, and replacing old beam-type scales with electronic scales.

We've also rebuilt our wharf at our dry bulk materials handling plant, and currently a new rail-mounted loader is being fabricated probably about 12 months away from erection. This new loader also includes extensive dust control equipment which will permit us to handle commodities heretofore we were unable to handle.

We recently took delivery of two new quick response fireboats, one of which has been stationed at our Barbours Cut facility and one in the upper reaches near the Turning Basin Area. This, with our third fireboat which is stationed at the confluence of Greens Bayou with the ship channel, gives adequate protection, which the port authority has the responsibility for providing. This permitted us to dispose of one fireboat which was in excess of 30 years of age. Just as an idea, these two fireboats cost something in excess of $700,000 each. I'd like to point out at this time that this new construction and repairs have been done at an excellent time while we had facilities we could take out of service for major rehabilitation, but more so, from the standpoint of the economic conditions that we have experienced. It has allowed the available funds to go much further to accomplish the things that needed to be done that we would have initially anticipated. This, of course, was because of the favorable bids which we had received on these projects.

A few statistics: In 1982, waterborne imports to the Port of Houston totaled 22,256,546 tons and exports 25,897,231 tons. Historically, our export tonnage is greater than our import tonnage. Revenue tonnages crossing port authority wharves totaled 15.5 million tons with operating revenues amounting to $48 million. This was the third highest total of annual cargo and revenues, trailing 1980, and the all-time record year of 1981. Total foreign trade, in dollar value, amounted to $23.9 billion in 1982, an excellent measure of the value of the port to both local and national economy. The importance of the port to the economics of the region, State, and Nation was assessed during 1982 in an economic impact study performed by the consulting firm of Booz-Allen & Hamilton of Bethesda, Md. This study showed that 1981 port activity generated almost $3 billion in revenues, including wages, and accounted for nearly 160,000 Texas jobs, including 31,700 which would vanish if the port ceased to exist.

Grain products, including rice, exported from Houston in 1982 exceeded 12 million tons with the major volume moved to the port via rail. When the tonnage of other dry bulk and miscellaneous commodities for export moved by rails are added, the importance of rail transportation to the Port of Houston is dramatically emphasized. To this, of course, must be added the import cargo which moves via rail from the Port of Houston. Congestion on our streets and roads, which impacts on truck movements of cargo, has been well documented.

The Port Terminal Railroad Association, of which all truck lines serving Houston, along with the Houston Belt & Terminal Railway are members, consists of 177 miles of track owned and leased by the port authority plus 158 miles of trackage owned by various industries. Since organization of the PTRA in 1924, rental payments to the port authority for its properties have been paid essentially on the basis of an annualized percentage of the interest rental base, this base being the dollar value of the facilities provided by the port authority. This percentage was constant at 5 percent for many years with 7 percent assessed on capital improvements provided in latter years. At this time an amendment to this original agreement is being executed, after 1½ or 2 years of negotiations, which will provide for future capital improvements to be made by the carrier members of the association with salvage rights to be recovered by the carrier should the agreement ever be terminated. It is anticipated that this will insure future expansion and improvements on a timely basis to permit the PTRA to adequately serve the users.

Related, of course, to national and world economic conditions, projections for population and economic growth for Houston and Texas are extremely optimistic with one forecast of in excess of 2 million additional population in the Houston area by the year 2000. An article in the Houston Post on September 8, 1983, originated by the Associated Press in Washington, projected Texas population to grow by more than 6.5 million between 1980 and 2000, which would move this State from third to the second most populous State in the Nation. In numbers the projection was for an increase from 14.2 million in 1980 to 20.7 million in 2000. The projections show that more than half the increase will be the result of people moving in from outside Texas.

From the foregoing there appears to be due cause for much optimism by we here at the Port of Houston Authority for continued increases in shops and cargoes which also impose the requirement for continued expansion of facilities and innovations in servicing shipowners, shippers, and all modes of transport which are vital to efficient and economical movement of freight.

Senator JEPSEN. I thank you, Mr. Curtis. It's a very complete report.

We welcome James Fitzgerald, vice president of operations, AT&SF Railroad.

STATEMENT OF JAMES R. FITZGERALD, VICE PRESIDENT, OPERATIONS, AT&SF RAILROAD

Mr. FITZGERALD. Thank you, Mr. Chairman. I think it's fair to tell you that besides the Fitzpatricks and the Fitzgeralds here today, we have a Fitzhugh in the audience. It's a pleasure to be here and to be a part of the meeting of the Joint Economic Committee. I'd like to say that I have personal responsibility down in this area for several years. I can assure you, and I think I can speak for the entire rail industry serving this area, that we have a fundamental interest in maintaining and building the import/export business. We recognize that it is not only in our best interest, but also the Nation's best interest to provide rail transportation service at a price that will help exporters and importers compete in world markets. This is a responsibility that we as managers willingly accept.

This afternoon I would like to discuss some of the changes that have taken place in the last few years that have had a profound impact on rail operations. Railroads are now in an excellent position to compete effectively and profitably for their proper share of the transportation market.

Railroads provide transportation service by bringing together resources in terms of physical plants and rolling stock, people to apply those resources, and a marketing strategy. The objective is to provide the transportation service that will build the business of rail users and provide the railroads with sufficient revenue to adequately compensate the people and renew the resources.

In the past, railroads have placed a heavy emphasis on capital expenditures as the way to improve transportation service. This approach was effective as long as anticipated traffic growth was realized and the existing traffic flows were maintained. Under these conditions, new facilities and equipment were properly utilized and the return on investment was sufficient for the renewal of assets. When traffic shifted from rail to other modes or failed to materialize because of truck and barge competition, the cost of handling the available traffic became in many cases too high. Profitability was reduced and sufficient funds were not generated to renew facilities and provide the capital to penetrate new markets.

Now with deregulation, railroads have been able to realine their operations to improve asset utilization. The Staggers Act provides a more effective method for shifting low volume traffic flows that cannot be handled efficiently by the railroads to the trucks. In these situations, the cost burden of operating losses and facilities maintenance was lifted from the railroads.

For those traffic flows that were sufficiently large to justify rail service, the Staggers Act provides procedures that allow the railroads to set rates that will generate a fair return on investments.

Deregulation also provides the opportunity for creative marketing to penetrate new markets and help shippers build their business. This marketing approach is often tied to changes in operations. For large flows of bulk commodities, rates are often based to encourage unit train operations or the movement of blocks of cars. Train and terminal operations are more closely coordinated for fast, reliable service. As a result, deregulation has placed additional emphasis on streamlining operations and increasing traffic flows as ways to improve asset utilization.

Piggyback traffic has grown rapidly and will continue to grow. It is one of the industry's greatest growth areas. Piggyback provides an efficient combination of truck and rail operations. The collection and distribution of the trailers and containers is performed by trucks, whereas the over-the-road movement is handled by rail. The growth of unit train and piggyback operations will reduce the switching workload on rail yards. This will effectively increase the capacity of the rail network, and the cars that still have to be classified will be handled more efficiently. As a result, all rail service will continue to improve.

Deregulation also provides railroads with the opportunity to use innovative approaches to improving car utilization. Plans are now being developed by some roads to offer reduced backhaul rates to convert empty return movements to loaded movements.

Another development that has taken place throughout the industry and is still continuing is the use of computer systems to support rail operations. These systems provide work orders to crews for the movement of cars, advance information to managers and supervisors for planning purposes, and the location of cars in the rail pipeline for the coordination of rail and shippers' operations. Now there are fewer delays to car movements because of paperwork. Rail operations can be formally scheduled and more closely controlled. Coordination between railroads and rail users is much improved.

Even with all these improvements, railroads can only operate efficiently with the full support of their employees. There are encouraging signs within the industry that the working relationship between management and labor, which has in the past been somewhat difficult, is undergoing significant improvement. There is a growing spirit of cooperation. Several railroads have established joint labor-management committees, quality work circles, and problem-solving groups. The results produced by the Houston Terminal project illustrate the value of the labor-management cooperative approach.

One of the effects of deregulation and recent railroad mergers has been a greater emphasis on competition between railroads. Mergers have changed traffic flows and increased competition. The use of contract rates has resulted in single railroad tariffs. As a result, cooperation between railroads in many cases is more difficult than it used to be. The need for cooperation between competing railroads is greatest in the major gateways, where there are terminal switch carriers owned by several railroads. At these locations, it is often difficult to obtain the agreement of all the railroads involved to implement changes in operations and make capital improvements.

At Houston, however, the Houston terminal project has been effective in facilitating improvements. By working closely with the Houston railroads and labor organizations, the project has been able to improve communications and provide the climate for making improvements.

The progress that the railroads have made in streamlining operations, with the cooperation of labor and in developing computer support systems, will be illustrated in later testimony. Mr. Handley, general manager of the PTRA, will give some specific examples of recent improvements in rail operations in Houston. Many of these improvements were the outgrowth of the work performed by the Houston/Iowa Grain Transportation Committee, which you, Mr. Chairman, established in 1980. Although the specific capital improvements by your committee were not fully implemented, the changes that have been made met the objectives that were established.

In closing, let me reemphasize the commitment of the railroad industry to provide transportation service that will build business. We now have more effective tools to design and price this service. In Houston, recent improvements in operations have been based, to a great extent, on labor/management cooperation as well as cooperation between carriers. Government's participation through its partnership in the Houston terminal project, has also been instrumental in helping us achieve the results we are here today to discuss. Thank you, sir.

Senator JEPSEN. And I thank you, Mr. Fitzgerald.

Next, we have Frank Hemmen, manager of Cargill, Inc. I thank you for your time today and your patience in bearing with us as we go through the various efficient operations. I again will remind the panel members that your remarks will be entered into the record as if read, and you may summarize if you so desire. You may proceed in any way you desire.

STATEMENT OF FRANK J. HEMMEN, MANAGER, CARGILL, INC., HOUSTON, TEX.

Mr. HEMMEN. Thank you, Mr. Chairman. As is inherent in all persons making a presentation program, I'm going to attempt to edit my remarks to prevent repetition. However, in case I do, let's call it reinforcement rather than repetition. Just to take a second of how we got to where we are and the way we in the industry interpreted what happened in the early 1970's and 1980's, in the early 1970's we had a number of factors including extensions of vast amounts of credit to overseas buyers, poor quality of production in the world grains, and a weakened dollar in the world exchanges. It all added up to the generation of U.S. grain exports from 1.8 billion in the early 1970's to the near 5 billion mark we see today. There is still room for growth. It is estimated that there is fobbing capacity for grain at the U.S. ports totaling 7.5 billion bushels. The fact that we export close to 5 billion bushels today and yet find the ports under no strain whatsoever attests to this situation. The railroads did a commendable job in adjusting the transportation to meet this volume crunch in the growth of the 1970's. In the early part of the decade the Port of Houston felt a particular problem develop as the line carriers reached the switch limits of the city and found a vast maze of yards and interconnecting roads and problems. At that particular time there was a large movement of corn to the Port of Houston using the rail mode of transportation involving the unit train rate to compete with the inland waterway system as it related to origination in Minnesota, Iowa, Nebraska, and other high-production, upper-Midwest corn producing States.

Our company was actively involved in the institution of the rates that produced the Iowa-to-Houston corn move. As part of the implementation of that program in 1972, we started to alter our physical plant by constructing another million bushels of elevator space. This was a necessity because the trains came down cheaply. If you held them more than 24 hours, the cost was prohibitive. At that time complaints began to surface concerning the integrity of unit trains after they arrived in Houston and made their way through the maze of yards and facilities. The same set of correct handling circumstances produced an equal number of complaints concerning the velocity of the unit after it reached the destination of the switch limits of the port. As these unit trains and single car equipment became involved in these velocity problems, then transit times from origin to destination doubled. As these transportation times doubled, then the net result was a car stortage for loading grain at the country elevators in the interior United States. The answer to the problem would lay in speeding the car flow and reducing the transit times back to where they were before the congestion developed. If the transit times was cut in half, then you double your car supply. There was not enough time to revise

procedures and change systems, however, that had been in effect for many decades. The interim action was construction of more rail equipment. This was instituted to the degree that we now suffer with a vast oversupply of cars especially in private company fleets. It's important to note that the loss of velocity of rail equipment in the 1970's was the real cause of the car shortage, and the surplus of equipment now is the proof of that theory. A quick glance at the Houston terminal selected operation and capital improvements from 1980 to 1983, demonstrates what has been done since the days of the shortage to increase this velocity. Such improvements in this area as well as other car handling locations in the United States lead us to believe that any sudden demands on our transportation system will be much better met than they were in the 1970's. We would hope that the condition which caused a company such as ours to acquire a number of hopper cars in its private fleet equal to the number carried on the books of many major railroads will never be necessary again. We must never allow the transit times to increase dramatically from points of origin to destination so that the illusion of carshortage results from that loss of velocity.

Let's talk about the current situation very quickly. During the 1980–83 years, our company in Houston, just for one, instituted the following capital and management procedures to maintain that velocity:

Unload capacity in our plant was increased from 300 cars per day to over 400 cars per day. This 25 percent increase in productivity resulted from the installation of car progressors, equipment, and procedural revisions;

In order that a landing site might be assured for unit trains that might be maneuvered across the switching limits, Cargill constructed a $1 million rail yard, increasing their loaded and unloaded car capacity to 360 cars on property;

The flow pattern in this expanded yard leaves room in front of the dumps for loaded cars brought in on each switch. The handling pattern and the length of the tracks allow us to assist the switching line, the Port Terminal Railway Association, in blocking cars: keeping the units together, that is. Here we're talking integrity, and otherwise maintaining the units. The situation whereby loaded cars are placed in one area before the dumps and the empties are situated in another area of the yard again facilitates the handling of cars within the limits;

During this period, we completed a $16 million elevator space and automation program which includes computerization of the rail pipeline servicing the Cargill elevator which stretches from Minnesota to Houston. This gives us instantaneous information as to the amount of grain ahead of our facility and where it is located in the pipeline. As grain arrives in the Houston switch limits and is so recorded by the TIES system of the PTRA referred to earlier, there are plans for the Cargill computer to directly interface with the railroad computer so that they may exchange unload information and further facilitate the flow of grain.

You asked, "Where do we go?" In our opinion, the millions of dollars that have been spent by the grain handling industry as described in the situation of our company—We have additional trackage, we have automation, we built rail yards and leased equipment. As will be described in the railroad presentation, millions have been spent by the

carriers. The Port Terminal Railway Association spent over $1 million in upgrading the rail which serves our facility in Jacintoport. Some of the double trackage he may describe in that report will be of great help in the velocity and integrity struggle.

It is reasonable to assume now that railroad and labor management could very well hold the key to operational improvements to properly utilize all this new equipment and concepts. Other segments of industry, and I heard it referred to as quality circles and other forms of participatory management, open new vistas every day using the labor/management resource. The approach of cooperation of labor and management in this Joint Economic Committee right here is certainly a positive step toward utilizing the input of all involved in the rail transportation industry.

Certain economic and logistical considerations in recent times have reduced the amount of Iowa corn moving by rail to the Texas gulf coast. An overabundance of river transportation has driven the freight rates in that mode to levels equal to transportation rates on the river in 1967. The competing mode of rail has not moved grain as a result. At any time, however, supply considerations of the eastern Corn Belt relative to the western Corn Belt and its relation to the various transportation modes could bring the Iowa-to-Houston move once again to the foreground. We feel we are certainly better prepared than we were 5 years ago or 10 years ago. In our segment of industry, and I'm sure I express the feeling of all segments of our complex here, we appreciate the efforts of groups such as the Jepsen Houston/Iowa Grain Transportation Committee in their function of focusing attention and coordinating the efforts of all those involved in the solution of a problem that benefits us all. We thank you, Mr. Chairman.

Senator JEPSEN. Thank you, Mr. Hemmen. And now Dan Collins, assistant general secretary and treasurer of the United Transportation Union. Dan, welcome, and you may proceed in any way you so desire.

STATEMENT OF D. W. COLLINS, ASSISTANT GENERAL SECRETARY AND TREASURER AND DIRECTOR OF EDUCATION, UNITED TRANSPORTATION UNION

Mr. COLLINS. Thank you, Mr. Chairman. In the few minutes I have with you, I would like to take a look at the other side of the coin as it deals with the role of people in all of these efforts. As I read that sign over the door where it says "The People are the City," in truth, the people are the industry. So in that regard, we've got to take a look for a few minutes at how I view our involvement here.

I appreciate this opportunity to discuss labor's involvement in helping to improve transportation service, not only for import/export traffic, but for the Nation. Traditionally, improvements in service come about by investing capital to provide additional facilities and equipment or to improve capabilities through increased automation. Labor welcomes capital investment. It is a lot better to work with modern equipment and well-maintained tracks. But another approach that should be given greater emphasis is simply to work smarter with existing facilities and equipment.

It has been estimated that better use of human capital has accounted for anywhere between one-fifth and one-half of the total growth in

productivity. It is evident that the potential for improved rail service from working smart is enormous. When this approach is coupled with capital investments, there will be an unprecedented improvement in rail service.

For the past 12 years, my special interests have been the development of the human side of capital in the railroad industry, and in searching for an answer to what role workers can and should play in improving the productivity of their industry and the quality of their working lives.

Here, if I might, I'd like to make a quote from a great American, made 25 years ago. His name is George P. Schultz. He had this to say back in 1958 about the concept of worker participation. He said:

> The idea of participation as a principle of organization is not a new one. It has its roots, after all in the ageless democratic ideal. It is expressed in our cultural emphasis on opinions before a decision is reached. In the management of our industrial enterprises, also, workers have long been and are now consulted intermittently on immediate production problems. But the rise and the strength of the American labor movement give testimony that the emphasis in industry has usually been the other way around, on the unquestioned authority and ability of management to make correct and acceptable decisions.

As this philosophy was once stated:

> All that a man wants is to be told what to do and to be paid for doing it.

The idea of worker participation on production problems, of democracy in industry, is basically then an old one, yet one that challenges a traditional management philosophy. Thus, the fundamental premise of the participation idea, just the opposite of that quoted above, might be stated in this way: "The average worker is able to make and, given the right circumstance, wants to make important contributions to the solution of production problems. If you cannot accept this premise, you need to consider this question no further."

The very nature of railroad operations makes it difficult for management to supervise the employees. Work is performed over wide geographic areas. Furthermore, the time required to complete a task varies because of such factors as traffic volume, weather, and unexpected events. Consequently, there are no standards. The attitude and motivation of the employees working in these situations have a great effect on performance and productivity. An employee that is deeply involved in his job and understands the role he is playing in producing the transportation product will contribute much more to his railroad than an apathetic employee, and yet many rail managers have not done enough to involve workers in railroad operations and improve the quality of working life. On these railroads, confrontation must give way to communication and dialog. The "us" and "them" mentality of people must change.

We are learning that using the skills and experience of those nearest the worksite is the best way to identify problems, to analyze them, and to implement solutions. The quality circle system of employee involvement in the decisionmaking process is teaching people that participation is a working tool that when learned and utilized, will benefit all. It can protect the well being of a company, and the job security of its people.

Surely, this joint search for improvements in the quality of service, productivity, and job satisfaction, is worth the effort of all concerned

with the future of their company. History has taught us well that where cooperation is impossible, conflict is inevitable, and we need no more wars of corporate genocide.

Many of us in the railroad labor movement have realized for some time that the railroad industry is our industry just as much as it is management's. We will prosper and have job security only if the railroads can prosper by competing effectively in the transportation market. We have nowhere else to go. Our futures are tied to our railroads, and we don't want our futures determined by forces outside our control.

We know that employees want to participate in the decisions affecting their jobs. For example, the quality circle programs provide employees with the opportunity to participate in the day-to-day operations. Now everyone must be taught and shown the value of using employee involvement as a way to resolve service problems. By the way, we have many of these activities underway now. We have them involved on the Milwaukee River, the Conrad, the Southern Pacific. We're experimenting and looking at possibilities on the Union-Pacific Railroad. There are many forms of this circle concept now being developed in the rail industry.

In my opinion, cooperative labor-management undertakings will have a profound impact on transportation service and quality of working life throughout the rail industry.

There is an evolutionary process underway that addresses change and issues of production and the sense of pride of people. It is a return of reason, and the application of the collective skill and will of men and women in search of solutions to the problems of their employment.

This joint labor-management quality worklife program is producing major motivational changes in the attitudes people bring to their workplace. When an employee is involved, he becomes someone, instead of something, and he likes the feeling. He is being used and not manipulated. But labor-management cooperation cannot be looked upon as a timely fad. It must be based on the need to produce a better transportation product and to improve the quality of worklife for all. With continuous labor-management cooperation, the process of employee involvement could humanize this industry.

An essential element in labor-management cooperation must be a willingness to experiment with change. You have a prime example of that in Houston. Of all the programs I've been involved with and in, in this field, you see some high-water marks on what we're capable of doing when we sit down and in a reasonable atmosphere begin to reason together about the problems that we have and seek to propose a solution.

This experimental approach which the Houston terminal project has used effectively, should be applied throughout the industry. The evaluation tools that have been developed here can be used by any carrier. But two things are required to insure its widespread application: It's an absolute commitment from management and a commitment from labor. I prefer to think of it as a commitment from people to do for themselves what others cannot do as well or at all.

Managers must recognize that the future of the rail industry depends on labor-management cooperation. A commitment must be made to

establish joint labor-management programs to improve the quality of transportation service and the quality of working life. There must be a willingness to staff these programs with capable people, and to underwrite a large part of the costs for as long as necessary to get the job done, because in these efforts, Senator, there are no quick fixes. There has to be a continuous process and a continuing process of developing this to an evolutionary process to bring it to where it's going to produce tangible results for this industry and our country.

Managers must recognize that the attitude and involvement of the employees is essential for the success of the company they manage. Good labor relations are a prerequisite for any cooperative program. Action must be taken to correct those situations where there is an overly harsh application of discipline, and an unsound labor-relations policy.

If the benefits of these programs are to spread rapidly through the industry, railroad management must show leadership. Too often, successful programs and approaches are not applied by a railroad simply because it was developed by somebody else. Too often, management takes the easy way out and keeps outmoded practices simply because it is too difficult and bothersome to bring about the needed change. The time interval between the successful demonstration of an improved approach and its widespread application is too long in the railroad industry, and management must take the initiative to shorten it.

The focus of our efforts must be put on the fast, reliable, and efficient movement of cars from dock to dock. To accomplish this objective for interline movements, railroads must learn to cooperate more fully with each other, as well as with their employees and their unions. They are in a difficult position of trying to compete and cooperate at the same time. In all too many situations, cooperation is sacrificed and transportation service suffers. The major gateways which are served by several competing carriers have the greatest needs for railroad cooperation. The only existing organization that is in a position to facilitate railroad cooperation is the Houston terminal project. This project is playing an essential role in bringing these people together in that kind of environment.

These are many examples of the establishment of successful labor-management cooperative programs with employee involvement. The problem that we face is how to speed up the application of this approach throughout the industry. Without an outside stimulus, it will just take too long to accomplish. The realization of the potential for improved transportation service will be delayed and transportation users will bear an unnecessary economic burden.

Railroad management must be encouraged to involve their employees. The Federal Railroad Administration should support programs of labor-management by providing the seed money to get them established. There is a great need for these programs in the multicarrier gateways as well as on individual carriers.

Labor for its part is willing and anxious to proceed. The need for practical change is recognized and we are willing to embark on cooperative programs. There may be initial resistance from local people but this usually is the result of lack of understanding of the cooperative approach coupled with a distrust of managers and poor labor-management relations. When the approach has been properly explained and

the labor-management climate has been improved, local labor representatives and their members will support cooperative programs from which all can benefit.

A creative way to use our God-given talents to improve our fortunes is a better system of managing our physical and human assets. All we have to do is practice what we preach.

In this climate, the "we" feeling can generate new beginnings where companies can prosper, people can grow, and we will have learned the true meaning of Alfred Marshall's words that, "The most valuable of all capital is that invested in human beings." Thank you very much.

Senator JEPSEN. Thank you, Mr. Collins. Do you have a copy of your remarks? They were most thoughtful, penetrating, and very effectively delivered.

Wayne Bennett from Arkansas, chairman of the Transportation Committee, the American Soybean Association. Welcome, Wayne.

STATEMENT OF WAYNE BENNETT, CHAIRMAN, TRANSPORTATION COMMITTEE, AMERICAN SOYBEAN ASSOCIATION

Mr. BENNETT. Thank you, Mr. Chairman. I am a farmer from Lonoke, Ark., where I raise soybeans, rice, and wheat. Grain producers, including soybean farmers, have a keen interest in increased transportation efficiency. ASA was privileged to participate in the Houston Terminal project, which was a unique opportunity for shippers, labor, and management to join together to improve rail-port infrastructure. Our immediate past president, Merlyn Groot, participated in the project, and our statement represents a collaborative effort of his observations and mine.

The American Soybean Association is a national, volunteer, nonprofit commodity association organized to assure the opportunity for a profitable soybean industry. ASA represents the interests of 450,000 soybean producers in more than 28 States. Few industries are as dependent on exports and efficient transportation as the U.S. soybean and grain industry. U.S. soybean farmers sell 55 percent of their production overseas, wheat farmers 66 percent, and grain farmers 30 percent.

ASA's Transportation Committee was formed in 1980 in response to growing farmer inability to ship grain in an efficient, expeditious manner. Farmers often faced delayed grain shipping, overdue payments, added freight charges, and reduced grain bids. Soybean growers, in particular, were concerned about investing their funds through State checkoff programs to develop overseas markets when our transportation system could not supply soybeans on an economical and timely basis. The job of ASA's Transportation Committee was to identify and develop specific projects to streamline soybean transportation and increase efficiencies.

ASA's Transportation Committee was honored to participate in the Houston Terminal project as one of our first efforts. We believe that the cooperative spirit of the joint labor-management task force provided an invaluable forum to address common problems and develop solutions to increase transportation efficiencies.

ASA greatly appreciates, Chairman Jepsen, your effort and dedication to the Houston project, which helped to create an unusual and successful combination of labor, management, shippers, and receivers.

I will not go into the healthy onsite achievements of the project, except to say that it excelled well beyond expectations. Terminal projects, such as Houston, appear to be capable of making major efficiency advances by targeting relatively small areas of concentrated problems, such as terminals.

We hope the Houston project will provide a model for terminal improvements at other gateway areas or ports, such as Kansas City. ASA would welcome the opportunity to work on such future endeavors.

As you know, one key to a successful terminal project is to bring together interested parties, demonstrate that each can gain from increased efficiencies, enlist joint participation, and develop cooperative projects. For example, increased volume at Houston enhanced employment stability for labor. Country elevators were able to significantly reduce their capital investment yet expand handling capacity. Rapid turnaround of unit trains improved railroad operating efficiency, also reducing capital investment requirements.

The Houston terminal project and other similar projects in the future benefit farmers as well. Given adequate inter- and intramodal competition, increased rail efficiency ultimately leads to more attractive grain freight rates. Such improvements make railroads more viable and in the long run give farmers more transportation alternatives to sell their grain. This ultimately results in better elevator bids to farmers. In an era of deregulation, railroads will be in a position to meet the challenges of self-regulation if they are more efficient and more competitive.

What demands will agricultural exports place on the U.S. transportation network in the coming year? Consistent demand from U.S. agriculture during the 1983–84 marketing year beginning this fall, although regional slack volume is likely in the major corn and soybean producing areas of the upper Midwest and South, where heat and drought caused extensive plant stress and reduced production. As a result, U.S. soybean production is now expected at about 1.5 billion bushels, down one-third from last year. That's a drop of 770,000 million bushels, or below last year's 2.27 million bushel crop. Corn production is seen at 4.4 billion bushels, down 48 percent from 1982. Wheat production is relatively unchanged from last year at 2.4 billion bushels. However, commodity price movement is a major determinant of the agricultural volume demand placed on our transportation infrastructure. Commodity price fluctuations, which have been dramatic for major commodities except wheat over the past 2 months, exert a heavy influence on farmer decisions to sell or store production. Since most farmers actually sell when grain market prices fall, after holding out for market highs, it is possible that large grain volumes will not appear on the market until the prices begin to drop, or at least stabilize.

Thank you for the opportunity to discuss the Houston terminal project and its importance as a model for streamlined grain movement.

Senator JEPSEN. Thank you, Mr. Bennett. George Gagen is assistant controller of Union Pacific Corp. I have been advised you did not go to one of the largest, most important meetings in the current history of the Union Pacific today. You were going to meet and decide where you are going to make a number of major improvements throughout your company.

Mr. GAGEN. Yes, that's true.

Senator JEPSEN. I appreciate you coming. Why don't you proceed and then we'll have the slide presentation.

STATEMENT OF GEORGE J. GAGEN, ASSISTANT CONTROLLER, UNION PACIFIC CORP.

Mr. GAGEN. The railroad industry each year spends billions of dollars to maintain and improve their physical structure. Ties and ballasts are replaced. Welded rail is installed. Locomotives and freight cars are added to the fleet. All of these activities are key ingredients to providing a better transportation product to the rail transportation customer community. But improving the physical plant alone does not guarantee a better transportation product. An equally important ingredient is information; information that is both timely and accurate. Switch crews need accurate and timely information to place the right car at the right customer, at the right door and at the right time. Local management needs accurate destination information to classify cars in a switching yard. In addition, advance information is needed on what cars are moving to a switching yard in order to coordinate inbound with outbound movements and prevent yard congestion. With accurate and timely information, railroads not only provide a better transportation product, but at the same time can control their operating costs and improve the asset utilization. In turn, this helps railroads remain competitive with other modes of transportation in providing service to the rail customer community.

To satisfy their information requirements, railroads have invested millions of dollars to develop complex and sophisticated computerized information systems. Vast communications networks link large-scale computer centers with local operating personnel to provide the means for collecting information at the source of the event, and delivering information to the location required to perform the next event. In some areas, railroad information systems are on the leading edge in applying computer technology.

These information systems include online, real-time car tracking systems that capture railcar event and movement information as cars move from origin to destination. Computerized waybill systems collect commodity and destination information. Rail customer support systems allow customers to supply to railroads exact car spotting information prior to car arrival at destination. Inquiry systems make all of this information easily retrievable. Yard inventory control systems store switching yard operating plans as well as the precise location of each car in the switching yard. These yard systems, utilizing the stored operating plan, generate switch lists with next track assignments reducing errors that were inherent with prior manual processes.

One railroad, the Missouri Pacific, has gone one step further. The Missouri Pacific freight car scheduling system generates a trip plan for each car the moment that the car is made available for movement on its lines. This trip plan is a computer-generated list of specific instructions on how that car should be handled from origin to destination. Based upon an overall railroad operating plan stored in a computer, the instructions indicate not only what trains should move the car, but also which switch engine assignment should spot the car at the customer destination on a particular date and time. As the car moves across the

system, any exceptions to the plan are noted and the schedule is automatically adjusted. A car's schedule is readily available to both railroad and customer personnel. This type of system is clearly the state-of-the-art in the rail industry.

This investment in sophisticated information systems has had a definite impact on the rail transportation community. For customers, this has meant an improvement in the rail transportation product. There is no doubt that rail service alone has become more reliable. Plus, both availability and accuracy of information has increased. For railroads, this investment in information systems has increased their car throughput capacities without the large capital investment required to expand the capacity of the physical plant. These systems have provided a valuable tool in controlling operating costs as well as improving the overall utilization of equipment.

Data exchange programs between railroads, and between railroads and rail customers, have become the key to the full exploitation of the rail information systems. For example, standards have been defined for transmitting railcar location messages from railroads to rail customers. Rail customers can use this information to plan in advance for the arrival of a shipment so that unloading can take place expeditiously. By collecting information from many railroads, rail customers can get an overall picture of the volume of shipments moving toward them as well as approximate time of arrival and coordinate their operations accordingly. The effect is that of a pipeline, with shipment paced to flow to destination at a rate that corresponds to the pace at which those shipments can be handled at destination. The grain movements from the Midwest to the gulf ports are a prime example of how the pipeline effect can be most beneficial in coordinating rail movements with ship capacity and availability.

The Association of American Railroads Railinc System is used as a primary channel through which car location messages and other messages are transmitted. Some rail customers have found it advantageous to transmit waybill information and empty car orders directly into the railroads' computer systems, circumventing the time delay and errors inherent with verbal communications. Administrative messages are sent between railroads and rail customers and supplement the other exchange programs. Beginning in 1984, certain railroads will begin transmitting freight bills directly to certain rail customers in still another example of progress in data exchange programs. Data exchange programs between railroads are equally as common. Waybills are exchanged; advance train consists are exchanged; advance interchange lists are exchanged; and administrative messages are exchanged, just to name a few.

Each of these data exchange programs, whether it be railroad to rail customer or railroad to railroad, has several things in common. The time delay and error potential in transcribing data from one information system to the next is virtually eliminated. The personnel productivity of all participants is improved. Advance planning is made possible. All participants benefit.

The development and implementation of the terminal information exchange system in the Houston gateway is a prime example of where the implementation of data exchange programs resulted in direct benefits to all participants.

As early as 1978, the Houston terminal project concluded that improvements in information systems that support railroad operations in the Houston area and the implementation of data exchange programs would greatly enhance overall terminal performance and improve the flow of rail traffic into and out of the Port of Houston. Communications between five road-haul carriers and two switch carriers serving the Port of Houston was crude at best, and consisted primarily of exchanging either train consist or interchange information after the fact in punchcard format or handwritten lists.

As a result, cars were frequently delayed or moved to hold tracks for lack of information. Numerous times cars moved in circuitous routes because the road-haul carriers had no means of determining what cars were being delivered to them, and this precluded any advance planning by either road-haul or switch carriers. The movement of rail traffic through the Houston gateway suffered accordingly as did the rail customer community. Although they were able to receive advance information on rail shipments moving toward them via data exchange with the road-haul railroads, when the shipments arrived at Houston, they effectively dropped from sight and information could be obtained only through verbal transmission. The pipeline effect was broken. The terminal information exchange system was proposed by the Houston terminal project at a meeting of representatives from the Houston carriers in October 1978, as a potential approach toward improving the information systems that support rail operations and providing for data exchange between carriers.

When the cost of TIES was determined, it became apparent that outside financial assistance would be required to facilitate implementation. The implementation of TIES required the approval of all railroads serving the Houston area. These railroads each had differing assessments on the value of information support systems, especially when a large financial investment was required. In addition to being controversial, TIES had to compete for limited funds against other projects for facilities and equipment. These other projects were not as controversial as multicarrier system projects and were usually given a higher priority.

The Federal Railroad Administration recognized the importance of increasing the effective capacity of the rail operation in the Houston gateway which in turn would improve the flow of export traffic through the port. The implementation of TIES would have that effect. The FRA, therefore, agreed to provide financial support for software development costs and incremental computer hardware expense as the means to overcome the institutional problems and facilitate the implementation of TIES. On this basis, TIES met with Houston railroads' unanimous approval in the spring of 1980. On August 29, 1981, TIES was cut over on time and within budget.

TIES provided for the implementation of a computerized car inventory control system on the PTRA. Data exchange programs were initiated between the two-switch carriers and all five road-haul carriers. This five road-haul carriers, in turn, had established data exchange programs with their customer community. The flow of information from switch road to customer, therefore, was established.

All participants benefited from TIES. For rail customers, a missing piece of the pipeline was added. Information on shipments in the

Houston area is now available to rail customers using the rail industry car location message standards. As TIES system is refined to transmit additional rail car event and movement reporting to the road-haul carriers, this additional information will be made available to the rail customer. In addition, the availability of advance information has reduced the initial terminal delay in switching cars caused in the past by the necessity to repeatedly transcribe the same information as cars moved from carrier to carrier in the terminal. The result of this was that cars moved to the customers in a shorter period of time. For the Houston railroads, TIES has improved the availability of information required for management and planning purposes. Operating costs have been reduced. Car throughput has increased, which effectively increased the car handling capacity of the Houston railroads without increasing the physical plant. The availability of information has reduced circuitous routing of cars and, also, the number of cars held for lack of information with the result that equipment utilization has improved. With the benefits of TIES proven in the real world, there is a definite potential for expanding the system to include three other small railroads in the Houston area, the Galveston, Houston, and Henderson, the Texas City Terminal, and the Galveston Wharves.

Unfortunately, those same sophisticated railroads information systems and data exchange programs that bring such great benefit to railroads and rail customers, also create problems. The information system capabilities of the railroad industry are not uniform. Proven advances in information systems and data exchange programs are often implemented only by a few railroads. There are several reasons for this. Sometimes the costs associated with moving to an improved technology is too great for a railroad whose financial position is precarious. At times, however, the benefits to be derived from moving to an advanced technology are not perceived by a particular railroad to be of significance when compared to benefits to be derived from other uses of its capital. All of these things inhibit technology transfer. As a result, the entire railroad community, both railroads and rail customers, suffer from information gaps. Rail customers will receive car location message transmissions from some railroads but no others, limiting planning and disrupting the pipeline effect. Rail customers can transmit waybill information from computer to computer with one railroad, but must rely on paper exchange with another creating two separate procedural systems. Estimated time of arrival based upon computerized trip plan can only be provided for shipments moving across one railroad. Certain railroads transmit and receive advance waybill and consist information with certain other railroads, but must use manual systems with still others. The costs associated with this nonuniformity are significant, both in terms of increased operating costs associated with dual procedural systems, and of lost benefits from not being able to fully utilize rail information systems' technological advances.

Over time, all railroads will evolve to at least the information system sophistication of the current industry leaders. It is imperative, however, that the pace of progress be quickened. The benefits that are not being realized are too great.

In the past, the Federal Railroad Administration has been instrumental in effecting progress in the railroad industry. The FRA has provided funding for technological advances, has encouraged tech-

nological transfers, and has coordinated and encouraged railroad industry cooperative efforts. In the future, the FRA should continue its role in these areas, especially in the area of technological transfers so that progress in rail transportation can be accelerated. The "not invented here" attitude must be dismissed.

The rail transportation customer community can play an equally important role. They must encourage the less advanced railroads to catch up, to move to the new technologies. They must encourage railroads to develop unifom information system capabilities. The combined FRA and rail customers' encouragement should go a long way toward increasing the rate of information systems progress in the railroad industry.

Thank you, Mr. Chairman.

Senator JEPSEN. Thank you, Mr. Gagen.

Welcome to Ed Handley, general manager of the Port Terminal Railroad Association. I would like to introduce you and invite you to present your testimony. I would publicly thank you for not only your last visit here, but today for the many courtesies and extra efforts that you've made to create a climate for all of us that has certainly been conducive to working together. I observed this morning that everyone, including men in the field working on repairs, called you by first name, regardless of what area geographically they were located in the railroad network. It's impressive that we have some true leadership which is reflected in the climate and the atmosphere and subsequent results that have brought the Houston port terminal right on the cutting edge of port technology and labor-management advances. I would expect that if we were to search and probe for one good supportive foundation for all the work that's gone on here, it would be both in your leadership and your attitude. And I appreciate it.

You are now invited to submit your testimony.

STATEMENT OF H. E. HANDLEY, GENERAL MANAGER, PORT TERMINAL RAILROAD ASSOCIATION, HOUSTON, TEX.

Mr. HANDLEY. Thank you, Mr. Chairman. Speaking for all of the employees at the Port Terminal Railroad, we enjoyed having you and your party very much. We are, as you saw, very proud of our work, proud of the service that we do perform. If you would just give me a few minutes, we'll get started.

[A slide presentation was presented at this point.]

Mr. HANDLEY. Mr. Chairman, I would like to take this opportunity to explain to this committee some of the more important rail improvements that have taken place in the last 3 years in the Houston gateway. Emphasis will be placed on how capital investments, changes in operations, and modifications to labor agreements have benefited the handling of both agricultural and nonagricultural products originating and terminating at the Port of Houston.

Basically, the network serving the city of Houston consists of five major class 1 railroads, and two terminal switch carriers. The roads entering Houston are: Atchison, Topeka & Santa Fe; Burlington Northern; Missouri-Kansas-Texas; Missouri Pacific; and the Southern Pacific. The local terminal railroads are the Houston Belt and Terminal, which is jointly owned by the Missouri Pacific, Santa Fe,

Burlington Northern, and Rock Island: and the Port Terminal Railroad Association, a nonprofit association of the five roadhaul carriers, and the HB&T.

Over the past decade, approximately 33 percent of all traffic handled by the PTRA has been export grain destined for Cargill, Houston Public Elevator, and Union Equity. Agri Industries, which is also located on the Houston ship channel, is served by the Southern Pacific Railroad.

Traditionally, export grain destined for the Port of Houston has been processed through the following major classification yards: HB&T's Settegast Yard, SP's Englewood Yard, HB&T's Basin Yard, and the PTRA's North Yard.

Settegast, the major switching yard of the HB&T, has undergone a $17 million rebuilding program since 1980. Switching leads on both the north and south ends of the yard have been decreased from three leads to two; inbound receiving and outbound departure tracks have been enlarged to accommodate longer trains; and automatic switching leads have been installed to increase switching productivity. SP's Englewood Yard, the largest classification yard in Houston, has also undergone a rebuilding program over the past 2 years. Installation of tangent point retarders on a rebuilt computerized hump, represents a $13 million investment which has enabled the SP to substantially decrease the time required to switch a car over their hump facilities.

The final major switching area for handling grain movements to the Port of Houston is the HB&T's Basin Yard and PTRA's North Yard. Prior to 1980, all the grain traffic destined for Cargill, Houston Public Elevator, and Union Equity was funneled through these two yards. Also prior to 1980, traffic destined for Agri Industries required handling through SP's Englewood Yard. Because of Englewood's close proximity to HB&T's Settegast Yard, during peak periods of traffic such as those experienced in 1979 and 1980, major conflicts in train movements were encountered at SP's Tower 87 Interlocking Plant. In order to alleviate some of these conflicts on grain movements within the terminal, innovative operating changes and major capital improvements have been made by the Houston rail community.

Prior to the establishment of the Houston-Iowa Grain Transportation Committee, grain arriving Houston via the Burlington Northern and Missouri Pacific destined for Agri moved through the HB&T's Belt Junction for yarding at HB&T classification yards, prior to interchange with the Southern Pacific at Englewood Yard. In order to bypass major classification yards, reduce terminal delay, and improve service, the rail operating plan has been adjusted for Agri grain trains. Presently, the BN and Missouri Pacific travel south through HB&T's Belt Junction and connect with the Southern Pacific at the Quitman Street connection. This connection, built in 1981, represents a sizable investment by the Southern Pacific to avoid moving Agri trains into Englewood Yard. From Quitman Street, Agri trains move across SP's tower 26, and proceed through the "Y" at the west end of Englewood Yard, bypassing handling at Englewood. These trains then move across HB&T's tower 86 and into SP's Basin Yard.

In addition, the Santa Fe Agri grain trains, under a trackage rights agreement, are utilizing SP tracks from Rosenberg, Tex., directly into SP's Basin Yard.

A recommendation that resulted from the work of the Houston-Iowa Grain Transportation Committee involved the expansion of this yard to accommodate unit grain trains up to 100 car lengths. In 1981, the SP rebuilt this yard at a cost of $1.5 million, increasing the car capacity from 300 to 500 cars and lengthening existing main lines to hold unit trains. From Basin, trains are moved for unloading at Agri, a 4½-million-bushel elevator capable of unloading 400 cars a day.

At a minimum, the ability to arrive and depart Agri unit grain trains at points other than major classification yards has reduced by 48 hours the time this traffic requires spending in the Houston gateway. These savings to car owners are in addition to the reduced operating costs to railroads as a result of more efficient car handling. Grain destined for Cargill elevator from the Missouri Pacific and Burlington Northern moves through the Belt Junction and HB&T's Pierce Yard. Pierce has been historically utilized as a holding yard for loaded and empty grain cars during periods of high-traffic volume. The HB&T recently completed a $2.2 million rebuilding program at Pierce, adding an additional five tracks, and increased car capacity from 180 to 750 cars. From Pierce, Cargill trains travel past the south end of HB&T's Settegast Yard, across SP's tower 87, and into the north end of PTRA's North Yard and are yarded in PTRA's "H" Yard. Santa Fe and MKT Cargill grain trains are also interchanged to the PTRA at North Yard. From the south end of North Yard's "H" tracks, Cargill trains move through American Yard, through Penn City Yard, and into Jacintoport.

The report prepared by the Houston-Iowa Grain Transportation Committee also contained a recommendation that Jacintoport be renovated to accommodate the holding of loaded unit grain trains as well as the rebuiding of empty outbound movement. In 1982, a $1.8 million program was completed by the PTRA which, to a great extent, resolves the integrity of empty unit grain trains issue addressed by the Grain Committee. From Jacintoport, Cargill trains move into Cargill's inbound storage tracks for unloading. Once grain cars are made empty, they are switched into Cargill's recently constructed outbound storage yard. With this addition to Cargill's rail facility, approximately 300 cars can be held for the outbound empty movement. The additional trackage in Cargill and at Jacintoport reduces the amount of switching required to rebuild a solid outbound empty unit train and expedites terminal departure. In addition to the capital improvements already discussed, several major operating changes, supported by local labor and management, have been introduced by the Houston terminal project. A prime example of the cooperative approach to improving car handling is the Union Equity Unit Grain Train Experiment. Prior to this experiment, Santa Fe unit trains destined for Union Equity, arrived Houston at the south end of New South Yard, moving across T&NO Junction, through HB&T's New South Yard, over HB&T's East Belt, and into HB&T's Basin Yard for interchange with the PTRA at North Yard. From North Yard, Union Equity trains travel across Bridge 5–A into PTRA's Manchester Yard.

In July 1982, an experimental agreement was signed by the PTRA and the United Transportation Union which temporarily waived the existing interchange agreement and allowed for the direct interchange of Union Equity unit trains at Manchester yard. To accommodate the

change, the Santa Fe signed a trackage rights agreement with the Southern Pacific from Rosenberg, Tex., to Houston; thus avoiding movement through their Belleville and Pearland, Tex., Yards, as well at HB&T's South and Basin Yards and the PTRA's North Yard. The GH&H Railroad built a new connection in order to deliver Union Equity trains to Manchester. The Santa Fe's new route crosses T&NO junction at the south end of HB&T's New South Yard and connects with PTRA trackage. The newly constructed PTRA/GH&H connection allows the MKT and the Missouri Pacific to deliver Union Equity grain trains directly to Manchester Yard. From Manchester, Equity trains bypass PTRA's Pasadena Yard en route to Union Equity storage yard, for placement at the 6 million bushel elevator where 350 cars can be unloaded per day.

From a terminal standpoint, a key to the congestion experienced at the Port of Houston in 1979–80 was the inability of PTRA's North Yard to handle extremely large volumes of traffic. Since 1980, we have not only addressed problems associated with grain movements but also from the perspective of nonagricultural products.

Prior to 1982, all traffic moving from the SP to and from the PTRA was interchanged into the south end of PTRA's North Yard. An average of three interchanges per day were pulled from North Yard, disrupting switching activities for up to 8 hours a day on the south end of North Yard which greatly hindered productivity. Three operating changes have been made since 1982 to address this problem.

Recently, the HB&T agreed to grant the Southern Pacific trackage rights over the HB&T's East Belt to PTRA's North Yard. This arrangement allows the SP to deliver directly into the north end of North Yard, which permits switching leads on the south end of North Yard to continue classifying cars without interruption.

Southern Pacific's woodchip traffic destined for Champion Paper Mill formerly moved into North Yard for classification and transfer to Manchester Yard. In June 1982, an experimental interchange agreement was signed with the United Transportation Union to allow direct interchange of this traffic at Manchester Yard, thus bypassing North Yard.

Also in June 1982, an experimental agreement was reached to allow direct interchange of traffic between the Southern Pacific and the Port Terminal Railroad at PTRA's Pasadena Yard. This traffic now also avoids movement through PTRA's North Yard.

The effect of these two experiments in conjunction with the Union Equity experiment, which is now a permanent agreement, allows the PTRA to avoid switching approximately 450 cars a day at North Yard, thereby increasing by 20 percent North Yard's car handling capacity. Prior to these changes in operations, a 2,000 car day on the PTRA would have had an extremely adverse impact on the operations of our railroad. Today, 2,000 cars are eagerly awaited.

Besides the many physical changes that have been made on the PTRA and other Houston railroads, I would like to point out that the employees of the Houston Belt & Terminal and the Port Terminal Railroad Association are the safest workers in the United States. Also, in my humble opinion, they are the most efficient and most productive.

To conclude this progress report, Mr. Chairman, let me say on behalf of the local railroad community that we believe our best efforts have

been put forth to improve the operations of the Port of Houston. We have but one simple request: send us more traffic so that the ultimate test of our achievements can be conducted. Thank you very much.

Senator JEPSEN. I thank you, Mr. Handley. This question I have can be answered by anyone on the panel. How many unit trains can be handled now in 24 hours? Is that a question that can be answered?

Mr. HANDLEY. Let me answer that in this respect, Mr. Chairman. I don't know, but I'd sure like to find out. I would say three times what we're used to, and I'm very interested in finding out. We have not only increased our capacity and increased our productivity, but I think the employees' attitude and morale have changed and they can handle it more efficiently.

Mr. HEMMEN. Also, what we have on the ground now is a communication setup between the railroads and the people who are using it. So, if any problems develop, we get together and talk this over.

Senator JEPSEN. You mentioned earlier about the fire protection equipment and the cost of the individual units. I noticed you had security cars this morning. You have boats and cars, but do you also have helicopters?

Mr. HANDLEY. The PTRA does not own any, but we have access to a few. Some of our customers up and down the railroad do have them and have extended the courtesy to us if we need them.

Senator JEPSEN. We talked about quality of grain a little bit this morning when we were out there looking at the latest equipment and watched them load. Quality of grain is going to be discussed in detail. There will be hearings, I expect. In the highly competitive world markets, we have not always in the past delivered the quality of grain that we might have, it has been rumored. This is not meant to be critical. This is asking some probative questions. In addition, do you handle any rice here?

Mr. HEMMEN. No, Senator, rice is more of a manufactured product like cornflakes. We're strictly bulk grain handling. It's done in the transit sheds in the Port of Houston.

Senator JEPSEN. In other words, it's not handled here by loadout in the form of putting it in holds. It's sacked and loaded out in individual containers?

Mr. HEMMEN. That's correct.

Senator JEPSEN. Mr. Hemmen, in the past it took 14 months to handle a major grain sale to the Soviet Union. How long do you think it will take now?

Mr. HEMMEN. Well, I'm like Mr. Handley. I'd sure like to give it a try and find out. First, I'd address your question that in your courtesy you were afraid to ask, I think, Senator. That was, with the drought, and lower quality grains will be coming, how are we addressing this? How are we going to look forward to possible quality complaints; not because of the thing that happened on the Mississippi River in 1976 which brought a bad image to us all for a while there.

Senator JEPSEN. It's unfortunate, I might add, because it was contributed to by sensationalism on the part of people who were elected to public office and chose to take a baseball bat after a fly, and as a result penalized the entire country. They knowingly or unknowingly ended up costing the producers, who are the ones who pay for all these requirements up and down the line. I brought that out when I was first

in office. The rules and regulations that they promulgated, among other things, had 42 separate ways that you were supposed to sample the grain. I am somewhat familiar with that. We feel, I think, the same way about that unfortunate incident. It was a black eye and didn't help our reputation any. It was so unnecessary.

Mr. HEMMEN. The way we're working now is, with the U.S. grain standards, there are certain items of moisture that have to be met, items of foreign material, a certain percentage of damage is allowed, to produce and export quality that suits the foreign buyer and domestic buyer. As we handle this crop, we'll just make certain as an industry that we have the ability to produce that quality. If we do not, we'll simply offer the best quality that this crop can produce.

Senator JEPSEN. I would ask this panel, the same as the first panel, that at your convenience within the realm of reason that, being familiar with the operations of several of the ports, the railroads, and officials represented here today, if you would please in your judgment submit to us in writing which ports you think could benefit from a Houston-type project. If you would rather not submit it in writing, you might be on the telephone trying to communicate with us. I would understand if you wouldn't care to submit it in writing. My staff will be calling you within the next 2 weeks to discuss this, rather than go into it in detail at this time.

Does anyone on these panels have anything additional to submit?

[No response.]

Senator JEPSEN. Well, the pride shown by today's witnesses should be obvious to all in attendance. I am pleased to share that pride. We've only begun to fully appreciate the truly massive benefits to farmers and to countless other industries in the port areas that resulted from the activities and work and the examples that have been set here in the last few years. As I indicated earlier, the city of Houston is at the cutting edge of port technology and labor-management advances. You, indeed, have led the way, and my congratulations and thanks to all of you.

If there are no further comments, I declare the hearing adjourned. Thank you, gentlemen, for coming.

[Whereupon, at 5:35 p.m., the committee adjourned, subject to the call of the Chair.]

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